

Shame regulation strategies used by children and adolescents: A systematic scoping and narrative review

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Abstract

Strong theoretical support exists for the disrupting and pervasive negative consequences associated with the shame affect (e.g., depression, disordered eating, non-suicidal self-injury, personality pathology, prevention of treatment-seeking) not reflecting intrinsic features of shame itself, but rather being consequences of *maladaptive shame regulation* and environmental influences (e.g., abusive interpersonal relationships, which may activate maladaptive regulatory strategies). Fundamental to the development of shame regulation patterns, or scripts, are developmental factors, particularly the generation of the self-concept and attachment relationship(s). This scoping review investigates shame regulation strategies used by children and adolescents, terminology in extant literature used to describe these strategies, and gender differences in regulation strategies. Electronic database searches (e.g., PsycINFO, Medline, and Education Source databases) were supplemented by reference-checking of included articles. Eighteen theoretical and empirical publications were included. The quality of included empirical studies was assessed; data was extracted against standardised templates and synthesised narratively. Substantial diversity was present in all key review outcomes, reflective of both the youth of the field and limitations in measurement tools. A theoretical framework for the aetiology of shame regulation scripts was developed to capture findings and drive future testable hypotheses. The framework includes compass of shame regulation strategies *attack self*, *withdrawal*, *attack other*, *avoidance* (Nathanson, 1994), as well as *soothe self* and *restore relationships* scripts. Clinical implications include shifting therapeutic focus from shame itself towards behaviours indicative of maladaptive shame regulation scripts, the understanding of which is central to the pursuit of minimising negative outcomes associated with maladaptive shame regulation.

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Shame regulation strategies used by children and adolescents:

A systematic scoping and narrative review

Overview

Shame is an intensely uncomfortable and painful affect, characterised by a felt sense of deflation as well as the belief that one is flawed, incompetent, and inadequate (H. B. Lewis, 1971; M. Lewis, 1992; Nathanson, 1994, 1987a, 1987b; Tomkins, 1963) and therefore “unworthy of acceptance and belonging” (Brown, 2006, p. 45). It is intimately involved in human development, including in the development of the self-concept and in the infant’s attachment relationship with their primary caregiver (Barrett, 1995; Izard, 1977; Kaufman, 1974; Schore, 1998; 2003a).

Shame can play an adaptive role in interpersonal and self-regulatory functioning, acting as a powerful regulator of behaviours, cognitions, and other affects (Izard, 1977; Retzinger, 1995). However, accumulating evidence has emphasised the maladaptive nature of shame, and empirically associated shame with a plethora of psychopathologies and concerns for public health. In spite of this, dysfunctionality and pathogenesis is not intrinsic to shame per se, but is instead a consequence of maladaptive *shame regulation*, defined as *the mechanisms through which one modulates shame in its intensity, timing, valence, and expression, often in pursuit of affective equilibrium* (Czub, 2013; Eisenberg, Fabes, Guthrie, & Reiser, 2000; Elison, Lennon, & Pulos, 2006; Gross, 2014, 2015; Gupta, Rosenthal, Mancini, Chaeven, & Lynch, 2008; Hill, 2015; Miceli & Castelfranchi, 2018; Schore, 1994, 2003a, 2003b, 2012, 2019; Swerdlow, Pearlstein, Sandel, Mauss, & Johnson, 2020; Taipale, 2016; Thomaes, Stegge, & Olthof, 2007), and environmental influences such as abusive interpersonal relationship which may activate maladaptive shame regulatory patterning.

Early childhood experiences and an infant’s attachment to their primary caregiver are formative in the development of shame, along with adaptive or maladaptive self-regulation

strategies (Schoore, 1998) including shame regulation scripts. A *script* refers to affective patterning, preferences, tendencies – metaphorically a ‘library’, or storage system wherein all relevant previous affective experiences are held, including what happened after affective expression – which influences how one responds in the future when faced with affect (Nathanson, 1994). One will have multiple levels of scripts, affect regulation scripts in general, and specific scripts, such as scripts for shame regulation. How an individual learns to regulate shame in early childhood (i.e., how one develops their individual shame regulation script) may have substantial implications for their psychosocial adjustment throughout life. However, very little is currently known about processes children use to regulate shame.

The field of shame regulation (if such a field can be said to exist yet) is in its infancy. There is a need for a review and synthesis of the developmental literature relating to shame regulation in order to a) provide a basis for the establishment of the developmental shame regulation field; b) communicate the current status of knowledge within this field; and c) offer a robust platform for future research by assisting the development of testable hypotheses relevant to shame regulation. To date, no such review has been conducted. To address this gap, this systematic scoping review summarises and analyses extant psychological, medical, and educational literature in an endeavour to answer the question: “How do children and adolescents regulate shame?”

To provide context, the following introduction first defines shame, including describing its link to child development, relevant theories, gender differences, and descriptions of the various foci of shame. Next, shame regulation is conceptually outlined, and finally, an overview of the present study is given.

Defining Shame

“To understand shame is, in some sense, to understand human nature.” (M. Lewis, 1992, p. 2)

An acutely painful affective experience, shame is characterised by feeling exposed, powerless, inadequate, and worthless, which drives a desire to disappear, withdraw, or avoid, or to hide the flawed self (Gilbert & Andrews, 1998; Hazard, 1969; De Hooge, Zeelenberg & Breugelmans, 2007; H. B. Lewis; 1971, M. Lewis, 1992; Schore 1998; Tangney, 1995; Tomkins, 1963; Wurmser, 1987). Indeed the English-language word ‘shame’ is derived from the Indo-European root ‘skem,’ meaning ‘to cover’ or ‘to hide’ (Garfinkle, 2012). When in a shame state, one suddenly and intensely becomes hyper-aware of the self (Izard, 1977). One typically lowers the head, slumps the neck and shoulders, and averts the gaze (Tomkins, 1963; Schore, 2020), while experiencing ‘cognitive shock’, a brief inability to think clearly (Nathanson, 1987a). The shame reaction excites acute vasodilatation, causing a blush (Darwin, 1872).

Shame has been empirically demonstrated to correlate with a wide range of psychopathologies and public health issues (see Tangney & Dearing, 2002, for a review), for example, depression (see Kim, Thibodeau, & Jorgensen, 2011, for a meta-analytic review), disordered eating (e.g., Woodward, McIlwain, & Mond, 2019), non-suicidal self-injury (Mahtani, Hasking, & Melvin, 2019), and prevention of treatment-seeking (e.g., Probst, Manthey, Martinez, & Rehm, 2015). Additionally, childhood shame-proneness is a risk factor for anti-social and risky behaviour in early adulthood (Stuewig, Tangney, Kendall, Folk, Meyer, & Dearing, 2015).

Because experiencing shame is intensely uncomfortable, “we often do everything we can to avoid the feeling of shame” (Elster, 1999, p. 154). Shame is associated with defence mechanisms such as denial and repression (Izard, 1977), and typified by maladaptive behavioural responses, such as social withdrawal, narcissistic rage directed at others, attacking the self, addiction, and perversion (Nathanson, 1994; Schimmenti, 2012; Taylor, 2015), which attempt to repair mood to regain affective homeostasis (Swerdlow, Pearlstein,

Sandel, Mauss, & Johnson, 2020). Hence shame plays a fundamental role in the behaviour and decision-making of children and adults (M. Lewis, 1992; Tangney, Stuewig & Mashek, 2007).

Silvan Tomkins (1963; and extensively elaborated upon by Nathanson, 1987a; 1987b; 1994;) argued that shame operates to inhibit positive affects such as interest, excitement, enjoyment, and joy. When one experiences an abrupt, unwanted inhibition or reduction in these affects, the individual immediately transitions into a low-arousal, shame state (Barrett 1995; Broucek 1982; Mills, 2005; Schore, 2019a). Mutualisation of positive affect is the driver of sociality, and shame acts as an innate regulatory system of this affective and emotional socialisation (Nathanson, 1994). Brief shame experiences are an essential part of normal development (M. Lewis, 1993; Schore, 2019a). Additionally, it can play an adaptive, constructive role in interpersonal functioning, where normal experiences including embarrassment and feelings of foolishness are important in learning boundaries of socially acceptable behaviour (Izard, 1977; Retzinger, 1995). For example, feeling ashamed about behaving aggressively may inhibit future aggressive behaviour (Velotti, Garofalo, Bottazzi, & Caretti, 2017). Thus shame is integral to socialisation, where the self-condemning nature of shame acts as a powerful regulator of behaviour in intra- and inter-personal functioning (Tangney & Dearing, 2002).

Cognitive theorists offer another perspective, and state that shame is a *moral* emotion, arising following moral transgression whereupon one evaluates the whole self (as opposed to a more specific behaviour, thought, or feeling) as flawed and unworthy (De Hooze, Zeelenberg & Breugelmans, 2007; Hosser, Windzio, & Greve, 2008; Kaufman, 1974; H. B. Lewis, 1971; Svensson, Pauwels, Weerman, & Bruinsma, 2017; Tangney & Fischer, 1995; Tangney, Stuewig & Mashek, 2007), and thus shame is a self-conscious emotion (M. Lewis, 1993; Tangney, 1999; Tangney & Fischer, 1995). The potential exposure of inadequacy

elicits a fear of negative judgement (either perceived or objectively real) from others. Shame involves a threat to the positive self-image. In response to shame, the individual then engages in strategies which aim to restore a positive self-view (De Hooze, Zeelenberg, & Breugelmans, 2010, 2011; De Hooze, Breugelmans, Wagemans, & Zeelenberg, 2018).

Common to all theoretical approaches is a kind of self-devaluation and, and a perceived or actual threat to social status. The latter is reflective of a threat to Kaufman's (1974) interpersonal bridge, and additionally of Elison's (2005) definition of shame as a perception of devaluation or threat of social joining.

The development of shame and its regulation begins in early childhood, influenced heavily by early experiences with caregivers and parenting throughout childhood (Katz-Wise, Budge, Lindberg, & Hyde, 2013; Kaufman, 1989; Kirby, Sampson, Day, Hayes, & Gilbert, 2019; Schore, 1998; Szentágotai-Tătar, Chis, Vulturar, Dobrean, Căndea, & Miu, 2015). Importantly, the attachment bond an infant forms with their primary caregiver is fundamental to shame's development, to such an extent that H. B. Lewis (1980) hailed shame the 'attachment emotion'. Additionally, the converse is equally as true – rejection by a caregiver, construed as an uncontrollable and global rejection of the self, is a prototypic shame-eliciting experience (Gross & Hansen, 2000; Schore, 1998). Shame is the infant's response to an interruption in a caregiver-led dyadic attunement, or "interpersonal bridge" (Kaufman, 1974, p. 573), necessary for the regulation of affect, whereby attachment formation is temporarily ruptured by the threat of separation and/or rejection. If the caregiver is sensitive to the infant's physiological-emotional response to this rupture, they will re-enter the affect regulating transaction by re-initiating mutual gaze, and thus the attachment bond is repaired through

dyadic synchronisation¹ (Schore, 2020) – the full cycle of attachment rupture and repair is completed and the interpersonal bridge re-built.

Attachment relationships are potent psychological and physiological regulators (Carter, 1998), and attachment style is a key variable in the development of affect regulation and vulnerability to psychopathology (Bradley, 2000). Empirical evidence also implicates the mutually-influencing relationship between shame and attachment style. In a sample of 204 adults, Gross and Hansen (2000) found that having a secure attachment style was significantly negatively correlated with shame in adults, whereas fearful and preoccupied attachment styles were positively correlated with shame. Fonagy and Target (2002) consider self-regulation a central mediator in the relationship between insecure and disorganised attachment styles and the development of pathology or maladaptive outcomes in adulthood. The marriage of shame, affect regulation, and attachment is evident, each inextricably linked to one another and fundamental to child development, acting as working models carried through the life course.

Shame's development continues throughout adolescence. Adolescents are thought to be particularly shame-prone due to their concern with social evaluation, heightening in self-consciousness (Szentágotai-Tătar, Chis, Vulturar, Dobrean, Căndea, & Miu, 2015), and shame-eliciting experiences associated with puberty and sexual maturation (Gilbert & Irons, 2009).

Cultural considerations

Shame is fundamentally a social emotion, its existence reliant on others in a social setting, and arising from a threat to the social bond. Due to this, shame is pervasive in virtually all social interaction (Gruenewald, Kemeny, Azaz, & Fahey, 2004; Scheff, 2000), and, what is considered as “shameful” must be considered within its socioethnographic

¹ Note: descriptions of the neurobiology of the mechanisms of dyadic synchronisation and affect regulation are beyond the scope of this thesis. See Schore (1998) for a comprehensive description.

context (Lindisfarne, 1998). Cultural differences also arise as a function of how self-conscious emotions intersect with the ideal self-construal advocated by one's cultural context (Furukawa, Tangney & Higashibara, 2012; Wong & Tsai, 2007). Indeed, in some cultures, behavioural responses such as downcast eyes and physical withdrawal are not associated with shame, but are signs that one is unpretentious, proper, and virtuous (Shweder, 2003).

Dominant models of shame, guilt, and embarrassment emerge from Western (primarily American) research, and are therefore applicable to individualistic Western cultural norms. The Western concept of the self is generally stable, and assumes the self is bounded and clearly discrete from others (Singelis & Brown, 1995; Wong & Tsai, 2007). In collectivist cultures such as those found in Asia and the Pacific, the self is interdependent and considered in the context of connections with others, where the thoughts and feelings of others are considered as important as one's own.

Shame vs. guilt. Shame and guilt share similarities, such as their experiential unpleasant nature, being situated within a social context, and their elicitation from negative self-evaluation (Miceli & Castelfranchi, 2018). A key distinction between the two emotions is that guilt is typically perceived as adaptive, associated with the possibility of reparative attempts (Elison, 2005; Kaufman, 1974), whilst shame is seen as more unpleasant and associated with withdrawal rather than reparation (Barrett, Zahn-Waxler, & Cole, 1993; Tangney, Miller, Flicker, & Barlow, 1996; cf. De Hooze, Breugelmans, Wagemans, & Zeelenberg, 2018). This has been empirically supported, including in a study of 305 pre-schoolers in America (Luby, Belden, Sullivan, Hayen, McCadney, & Spitznagel, 2009). Elison (2005) conceptualises shame as an affect, and feelings of guilt as multiple affective-cognitive hybrids. Additionally, excessive and unregulated shame is seen as far more damaging than guilt (Schore, 2019a).

Shame and guilt can co-occur, particularly in children (Blum, 2008; Eisenberg, 2000; Ferguson, Stegge, Miller & Olsen, 1999; Gilbert, 2009). However, in individualist cultures, there is a clear experiential distinction between the two emotions. Lewis (1971) described this difference through the differential *emphasis* of the self in the emotion experience. In a guilt state, one might say “I did that awful *thing*”, versus in a shame state, “*I* did that awful thing.” Guilt does involve negative self-evaluation, but the focus is on a particular guilt-inducing behaviour, emotion, or cognition, somewhat distinct from the self, therefore not affecting perceptions of one’s core identity (Eisenberg, 2000). However, in shame, the unworthy, degraded self is the focus of the emotion experience (Lewis, 1971; Tangney, 1998; Tracy & Robins, 2006). Miceli and Castelfranchi (2018) recently suggested that shame is distinguished from guilt by the focus of the standard that one negatively evaluates the self against. Guilt implicates an evaluation against moral standards, whereas shame implicates an evaluation against one’s ideal self-standard.

The shame/guilt distinction is clear in individualist cultures. However, there may be greater overlap between shame and guilt in collectivist cultures where the self/other boundary is permeable and people do not view themselves as separate from their social context or the actions of others (Wong & Tsai, 2007).

Valuation of shame. In an individualist culture, shame is considered unpleasant. Thus, even the anticipation of shame can act as a powerful regulator (Elster, 1999). However, in a collectivist context, shame may be adaptive and highly regarded in motivation for self-improvement and adaptation to group norms. For example, in te ao Māori, the world of the indigenous people of New Zealand, the word “*whakamā*” denotes “extremely painful” and “devastating” feelings typically associated with the Western constructs of embarrassment and shame (Cameron, Pihama, Millard, Cameron & Kopu, 2017; Metge, 2014; Ministry of Justice, 2001). Whakamā is elicited when an individual becomes aware of feelings associated

with having transgressed community values, and consequently directly functions to restore relationships via behaviour regulation. Thus shame may be adaptive for collectivist individuals where its elicitation acts as an important motivator to improve performance (Wong & Tsai, 2007). In such contexts, reducing or eradicating shame may have negative psychosocial consequences.

Theories of shame

Broadly speaking, three families of shame theory exist: biological/evolutionary, psychoanalytic, and cognitive-appraisal theories, which are useful frameworks for studying its development, function, and behavioural consequences.

Evolutionary theories. Evolutionary theories consider shame an adaptive and innate psychobiological mechanism, arising in response to social threat. Shame's elicitation functions to signal a social rank threat, allowing defensive actions to be taken to immobilise behaviour and conceal actions which would otherwise expose one to danger (Elison, 2005; Gilbert, 1989; Gilbert & McGuire, 1998; MacCurdy, 1930; Sznycer, Tooby, Cosmides, Porat, Shalvi, & Halperin, 2016). This is particularly vital where social group membership is advantageous for survival (Elison, 2005).

Shame is characterised by its previously noted distinctive physiological manifestations, including an averted gaze, a lowered head, and the excitement of a blush (Darwin, 1872; Tomkins, 1963). These function to communicate an individual's shame state to others, signalling submission, therefore adaptively protecting positive self-regard and perceived respect from others (Barrett, 1995; Gilbert & McGuire, 1998).

Tomkins (1963) considered shame to be one of nine specific unmodulated 'innate affects,' all of which are physiological reactions to the external and internal worlds, and present from birth. In support of this perspective, Nathanson's describes an interpretation of the 'still face' experiment (Tronick, Als, Adamson, Wise, & Brazelton, 1978) as showing a

primitive shame response in two-and-a-half-month to three-month olds – markedly similar to Schore's (1998) description of shame arising from moments of rupture in the attachment-generating caregiver-infant dyadic interaction.

Psychoanalytic theories. Psychoanalysts consider shame a painful affective experience arising as a result of intrapsychic conflict between the actual self (ego) and ideal self (ego ideal) (Broucek, 1982; H. B. Lewis, 1971), or as the painful consequence of a repressed id-centred impulse (Hazard, 1969).

Psychoanalysts acknowledge primitive shame experiences emerge within the first 18 months of life (Broucek, 1982), and emphasis is placed on the role of early childhood experiences in the development and trajectory of shame. Kohut (see Morrison, 1989, for a review) suggested shame may emerge following inadequate parental mirroring and affirmation of a child's exhibitionistic needs.

Although Freud's (1896) early writings described shame as emerging from one's fear of being exposed and laid bare, he came to consider the conflict between the ego and ego ideal to be related to guilt, not shame. Indeed, in spite of much creative work on shame having been completed within the psychoanalytic discipline, orthodox psychoanalysts would typically consider shame as second-order to guilt, or ignore shame entirely in favour of anxiety and guilt (Nathanson, 1987a; Scheff, 1997). Morrison (1983) suggests this view may be a function of shame being fundamentally tied to the concept of the self, which is a concept not easily integrated into early psychoanalytic Freudian thinking. However, the highly-regarded psychoanalytic shame theorist Helen Block-Lewis (1971) substantially challenged this emphasis on guilt in her foundational contribution to the shame literature.

Cognitive-attributional theories. Within this theoretical perspective, it is suggested shame arises following an individual's subjective cognitive appraisal of a conflict between the actual self and a belief or standard. Shame arises when one perceives a global failure of the

self, seen as innate, stable, and uncontrollable, following failure or violation of one's own, another's, or a group's standard(s) (M. Lewis, 1992; Tracy & Robins, 2006), driving motivational inhibition and a desire to withdraw or hide (Weiner, 1985).

Echoing H. B. Lewis' (1971) distinction between shame and guilt, in M. Lewis' (1992) cognitive attribution theory, he asserts shame is related to a global evaluation of the whole self, where guilt is related towards one's specific actions. Additionally, he suggests younger children have a greater propensity towards making global rather than specific attributions, so shame may be more common than guilt in younger children.

Cognitive-attributional models state that in order to experience shame, one must a) have developed a self-concept, which has been shown to emerge normatively by 30 months (Bullock & Lütkenhaus, 1990), b) be capable of self-recognition and self-reflection, and c) have internalised standards acquired through socialisation in order to compare oneself to such a standard (M. Lewis, 1992; Lagattuta & Thompson, 2007). Thus cognitive-attributional theorists argue shame is not experienced until later in infant life than is argued by evolutionary theorists.

Summary of theoretical approaches. Evolutionary theorists argue shame is present from very early infancy, whereas psychoanalysts and cognitive theorists argue shame emerges later in infant life, when one is capable of evaluating the self to an ideal. The body of empirical literature demonstrates that in normal development, behavioural markers of primitive shame responding can be normatively found by 2½ to 3 years of age.

Gender

One of the central themes in Helen Block Lewis' (1971) landmark publication *Shame and Guilt in Neurosis* is the existence of gender differences in shame. Lewis argues shame is a more feminine than masculine characteristic, with guilt typically prevailing over shame in men. Characteristics associated with a typical feminine gender role, socialised and considered

‘desirable’ by the cultural context, include the importance of caring for and tending to others. This contributes to a female tendency to direct criticism and negativity inward to the self in order to preserve relationships and appease others. Both Darwin and Freud (1986) also considered self-conscious emotions such as shame more typical of women than of men, with Darwin noting in 1872 “women blush much more than men” (p. 331).

Benetti-McQuoid and Bursik (2005) found that young women, and indeed men with a traditionally feminine gender role, were more shame-prone than individuals who fulfilled other gender roles, supporting Lewis’ (1971) assertion. This also suggests gender differences in shame may be as a result of socialisation rather than any innate biological difference.

The existence of a gender difference in shame is not universally supported (cf. Else-Quest, Higgins, Allison, & Morton, 2012; Ferguson, Stegge, Eyre, Voller & Ashbaker, 2000; Mills, Arbeau, Lall & De Jaeger, 2010).

Only a small number of studies have addressed whether there is a gender difference in how children and adolescents respond to or regulate shame. Vagos, Ribeiro da Silva, Brazão, Rijo, and Elison (2019) studied 2,320 adolescents (12-21 year-olds) and found girls were significantly more likely than boys to respond to shame adaptively. Also, girls were significantly more likely to respond by withdrawing or attacking themselves (i.e., internalising).

Foci of Shame

As the study of shame has garnered more interest over the last 50 years, shame has been partitioned into sub-concepts (e.g., internal and external shame, toxic shame, state shame, anticipated shame, shame-proneness, and shame in specific contexts such as achievement shame). This conceptual sensitivity in the shame literature offers the benefit of a highly focussed exploration into narrow typologies of shame, and of concepts which might be uniquely associated with one particular shame focus. However, there is a risk of empirical

findings within one shame sub-focus being misguidedly generalised to another sub-focus where results may not hold, particularly when the various foci of shame are not considered in relation to one another. Although not exhaustive, the following descriptions provide a sense of the various foci of shame, as well as how they overlap conceptually within the overarching definition of shame.

Shame is often dissected into two types: internal – what one feels and thinks about oneself, and external – what one believes others feel and think about them (Gilbert, 2003, 2004; Misailidi, 2018; Pinto, Matos, Castilho & Xavier, 2014). An extreme of shame where one experiences “the expansion and prolongation of the features associated with affect shame throughout one’s personality” (Pattison, 2000, p. 94) has been referred to as toxic shame (e.g., Bradshaw, 1988), chronic shame (e.g., DeYoung, 2015), and trait shame (e.g., Partridge & Wiggins, 2008; Rohleder, Chen, Wolf & Miller, 2008). Further, state shame – “‘in-the-moment’ feelings of shame” (Turner, 2014, p. 577; and Marschall, Sanftner, & Tangney, 1994) is discrete from anticipated shame, defined as “personal expectations of situation-specific shame” (Tibbetts, 1997, p. 235). Shame-proneness is a distinct concept again, described as an individual’s propensity to make negative self-evaluations and experience shame (Carpenter, Tignor, Tsang & Willett, 2016; Cohen, Wolf, Panter & Insko, 2011). The various foci of shame allow for greater specificity in shame research, and will be important to the current study.

Shame Regulation

The central tenet of this thesis is that shame is not intrinsically dysfunctional or pathological per se, but dysfunctionality arises instead as a consequence of *maladaptive shame regulation* and environmental influences which may activate maladaptive regulation scripts. This has been increasingly supported by contemporary theorists in the last two decades (e.g., Czub, 2013; Gupta, Rosenthal, Mancini, Chaevens, & Lynch, 2008; Miceli &

Castelfranchi, 2018; Schoenleber & Berenbaum, 2012; Schore, 2019; Thomaes, Stegge, & Olthof, 2007). Individuals use a wide range of regulatory strategies for managing unpleasant affects such as shame (Parkinson & Totterdell, 1999), and shame, as is true for all emotions, may be adaptive or maladaptive depending on both situational factors and the affect regulation strategies used (Barrett, 1995; Ferguson & Stegge, 1998; Gross, 2015; Miceli & Castelfranchi, 2018).

Shame regulation can be considered under the theoretical umbrella of *affect regulation*, the central tenets of which were described in Schore's (1994) first book, *Affect regulation and the origin of the self: The neurobiology of emotional development*. Affect regulation refers to the automatic and effortful processes by which one modulates their moods, emotions, and feelings in intensity, timing, valence, and expression in pursuit of affective homeostasis (Eisenberg, Fabes, Guthrie, & Reiser, 2000; Gross, 2014, 2015; Hill, 2015; Schore, 1994, 2003a, 2003b, 2012; Swerdlow, Pearlstein, Sandel, Mauss, & Johnson, 2020; Taipale, 2016). *Shame regulation*, then, is defined as *the mechanisms through which one modulates shame in its intensity, timing, valence, and expression, often in pursuit of affective equilibrium*.

Schore (2019b) notes: 'a brief descent into shame is a necessary part of development, teaching the infant to avoid what is socially unacceptable or physically dangerous. However, long periods of unrepaired shame are physiologically toxic to the developing brain. They also have negative long-term consequences for the personality, resulting in chronic difficulties with self-esteem' (p. 234). Thus it is clear some regulated shame is normal and necessary for development, but "unconscious dysregulated shame is a central mechanism of psychopathogenesis" (p. 135).

In Taylor's (2015) literature review on the influence of socio-interpersonal aspects of posttraumatic stress disorder (PTSD), he draws on prior work framing shame as not

inherently dysfunctional (Elison, 2005; Webb, 2010). He suggests the maladaptive regulation of post-trauma shame may play an important role in PTSD symptomatology and subsequent co-morbidities. Maladaptive shame regulation strategies are described as manifesting as substance abuse, anger, social withdrawal, and depression. Shame then remains unacknowledged and avoided. Lewis (1971) referred to this as ‘bypassed’ shame, a shame defence mechanism which operates to replace experiential shame with a distancing of the self, thus preventing shame feelings from developing.

Additionally, in his psychodynamic approach to understanding the link between developmental trauma and pathological shame, Schimmenti (2012) notes that shame is not inherently pathological, “but when it becomes pervasive or disavowed [i.e., dysregulated], it will have a negative impact on an individual’s life” (p. 205).

Velotti, Garofalo, Bottazzi, & Caretti, (2017) sought to examine the relationship between trait shame and its previously-established correlates including self-esteem, aggression, and psychopathology in a sample of 380 adults. Mediation analyses revealed that, for women only, emotional suppression fully accounted for the association between shame feelings and hostility and psychological distress. Additionally, Gupta, Zachary Rosenthal, Mancini, Cheavens, and Lynch (2008) found emotion regulation difficulties mediate the effect of shame on eating disorder symptomatology in a convenience sample of 154 undergraduate women. Szentágotai-Tătar and Miu (2016) found that habitual emotion regulation tendencies independently explained 22.57% of the variance in the association between shame-proneness and history of childhood trauma in a large sample of Romanian adolescents. As Velotti et al. (2017) note, these findings may suggest that “both the externalization (i.e., hostility) and internalization (i.e., psychological distress) of shame feelings could be explained by poor emotion regulation, rather than being an effect of shame

per se,” (p. 182). Indeed, “affect dysregulation is a fundamental mechanism of all psychiatric disorders” (Schore, 2003a, p. xvii).

It has been suggested that shame’s unpleasantness may mean experiencing the affect is likely to evoke maladaptive shame regulation strategies or defences, rather than hedonic strategies which aim to reduce negative affect and increase positive affect (Swerdlow, Pearlstein, Sandel, Mauss, & Johnson, 2020; Taylor, 2015). In support of this, Szentágotai-Tătar and Miu (2016) found shame-proneness was associated with higher use of maladaptive regulation strategies and lower use of adaptive regulation strategies in 13-17 year-olds.

Nathanson first mapped shame regulation mechanisms in 1994, summarising the four categories of shame regulation strategies in his Compass of Shame (Figure 1), described as libraries of shame defence systems. At the *withdrawal* pole, a person withdraws or hides from the situation to conceal themselves, limiting the exposure of the flawed self to others. At the *attack self* pole, anger is turned inward to the self via action-tendencies such as self-criticism. Those who engage strategies captured in the *avoidance* library are aware of the painful experience of shame, but in denial of its message, and make attempts to evade the feeling of it (e.g., by using alcohol or drugs). *Attack other* strategies are used to combat shame by demeaning another person or a group in order to shame them and restore a sense of power in oneself. The *attack self* and *withdrawal* poles share two key elements – an acknowledgement of shame as valid, and an acceptance of its negative message of the self being flawed. This is in contrast to the *attack other* and *avoidance* poles, both of which involve denial of shame’s negative message.

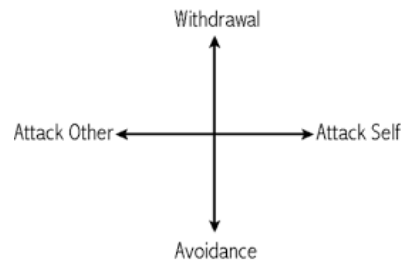


Figure 1. Nathanson's Compass of Shame (1994)

Strategies of maladaptive shame regulation in personality pathology have been mapped by Schoenleber and Berenbaum (2012b; see Figure 2), who grouped regulation strategies indicative of all *DSM-IV* personality disorders (excluding schizoid personality disorder). The authors posit “much of what is considered personality pathology is, in fact, the result of behaviors indicative of an inability to avoid or alleviate shame adaptively” (p. 11). Regulation strategies were grouped into prevention, escape, and aggression, the last of which was sub-categorised into other-directed and self-directed. There is an evident parallel between their work and Nathanson's (1994) – *self-directed aggression* and *other-directed aggression* map onto *attack self* and *attack other* respectively. *Escape* can be seen as a similar concept to *withdrawal*, and the same is true for *prevention* and *avoidance* if the implication is that these are strategies occurring at the start of the affect's temporal sequence.

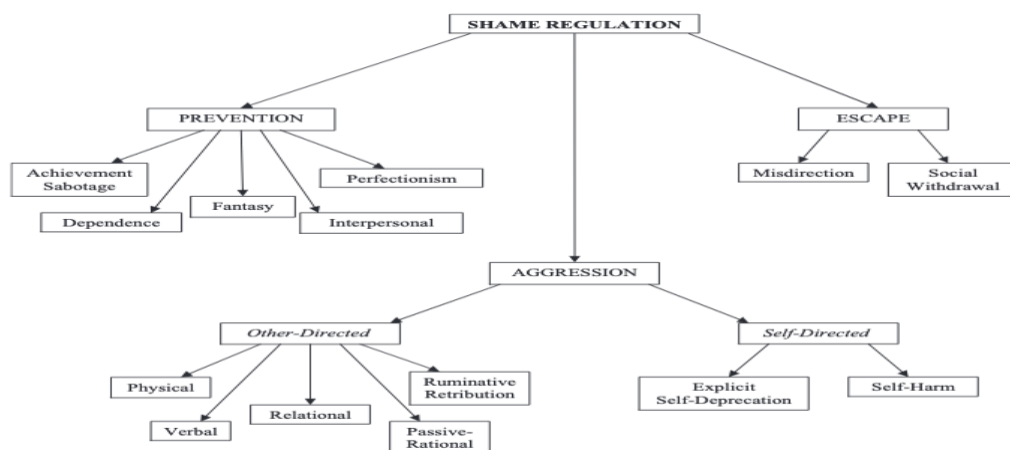


Figure 2. Schoenleber and Berenbaum's (2012) shame regulation framework

Nathanson's (1994) compass of shame is relevant “for the adult” (p. 312), and Schoenleber and Berenbaum (2012) do not specify the ages for which their framework

applies, but make no mention of childhood or the development of shame regulation scripts. However, early childhood experiences are the root of pathological and non-pathological shame throughout life (Schimmenti, 2012), with maladaptive properties of shame having been demonstrated to start very early in childhood (Ferguson, Stegge, Miller, & Olsen, 1999). Additionally, maladaptive shame has been found to be a feature of depression as early as in the preschool period (Luby, Belden, Sullivan, Hayen, McCadney, & Spitznagel, 2009). Thus a developmental approach to shame regulation is vital in order to understand the aetiology of regulation scripts, and to inform how a negative cycle of maladaptive shame regulation may be disrupted. No such exploration of shame regulation in children and adolescents yet exists.

Shame is an unpleasant affect, and thus it is logical that regulatory attempts are made to *reduce* its intensity, duration, expression, and/or valence. However, regulatory processes may also increase shame. For example, cognitive reappraisal (at its repeated extreme becoming rumination) of a situation is often used as an affect regulation strategy (Brockman, Ciarrochi, Parker, & Kashdan, 2017). Yet if a child ruminates on a memory of a shame-eliciting experience, like having been teased by a sibling about a particularly sensitive subject, state shame is elicited in the absence of any real-time shame-eliciting stimulus. Continued rumination, rather than regulation techniques such as distraction, will increase, or up-regulate, state shame.

Current research pertinent to shame regulation may explicitly label regulation strategies. However, given that shame regulation is an emergent concept, researchers may also simply describe shame's action tendencies. It is important to consider these action tendencies as likely attempts to regulate shame. For example, if an adolescent has been shamed in a classroom by their peers, they may withdraw from the social setting and excuse themselves to use the bathroom. This action tendency is likely to attenuate the prolongation of

shame by separation of the adolescent from the shame-eliciting stimuli (i.e., their shaming peers).

Terminology

A pressing problem in the study of processes individuals use to change their experiences of shame (i.e., shame regulation) is the lack of a standardised term to describe a process of increasing, decreasing, or adjusting shame. Currently, a variety of nomenclature is used to describe these processes, such as *shame coping* (e.g., Campbell & Elison, 2005, p. 96), *shame management* (e.g., Ahmed, 2005 p. 23; Nyström & Mikkelsen, 2013, p. 519), and *shame regulation* (e.g., Elison, Garofalo, & Velotti, 2014; Schalkwijk, Van Someren, & Wassing, 2019; Schalkwijk, Stams, Dekker, Peen, & Elison, 2016; Schoenleber & Berenbaum, 2012), each of which carries slightly different connotations and implications.

The absence of a standardised term, and the consequent need to interpret these variations in nomenclature, hinders progress by making research comparisons difficult. Standardised terminology is essential to ensure clear communication and shared understanding in future research endeavours. One aim of this thesis is to consider terminologies used in the shame regulation field, and to propose the adoption of a simple, universal terminology to guide and unite the field. Until this point, the term *shame regulation* will be used as a useful and instructive descriptor.

The Present Review

Understanding *which* strategies children and adolescents use to regulate their shame, as well as *how* individuals generate their shame regulation scripts, offers potential to modify the magnitude of a wide variety of negative outcomes associated with shame and the impact of its maladaptive regulation.

The number of publications in this young field of developmental shame regulation has not yet been systematically examined. Thus there is a need to analyse and integrate the

disparate literature in order to communicate coherently the present status of the field and identify directions for future investigation.

Primarily, the present scoping review aims to systematically and comprehensively review the extant developmental shame regulation literature in an attempt to explicate which regulation processes are used by children and adolescents to change their experience(s) of shame. Results will be integrated with extant theory in the presentation of a theoretical framework of the aetiology of shame regulation scripts, including descriptions of shame regulation strategies used, to assist the future development of testable hypotheses pertinent to shame regulation and associated constructs. This thesis will provide a clear and unifying terminology for future research endeavours.

A narrative scoping review methodology was selected because of its greater ability to answer review questions (as compared to other review types, e.g., meta-analysis), and due to the high heterogeneity across publications in this emerging field (Deeks, Higgins, & Altman, 2011). Additionally, the outcomes of interest were largely qualitative in nature (i.e., terminology, shame regulation processes). Where review outcomes were quantitative, they were not necessarily included as specific study outcomes in the publications (i.e., no study reported the effect of shame regulation strategies on shame). A narrative review “provides a vehicle for demystifying heterogeneous and discrepant findings using scholarly reasoning” (Tarren-Sweeney & Goemans, 2019, p. 275) and thus holds value in affording insights additional to those yielded by meta-analysis.

The present review was designed to address the following research questions:

1. What strategies do children and adolescents use to regulate shame?
2. How do children and adolescents respond to shame? What action tendencies are associated with shame?
3. What terminology is used to describe the above strategies?

4. What are the effects of regulatory processes on experiences of shame?
5. Are there gender differences in shame and shame regulation strategies used by children and adolescents?

The United Nations (1990) defines children as all those under 18 years of age, and the World Health Organization (2014) defines adolescents as those between 10-19 years of age. For the purposes of this review, adolescents are defined as all individuals 11-17 years of age inclusive, and children defined as all individuals under 11 years of age. It is important to note that the definition of children as those under 18 years is a legal, not developmental, construct.

Methods

This review was conducted according to scoping review guidelines (e.g., Arksey & O'Malley, 2005; Colquhoun et al., 2014; Levac, Colquhoun, & O'Brien, 2010; Peters et al., 2010) and, to the extent they were relevant to present aims and methodologies, the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA; Moher, Liberati, Tetzlaff, & Altman, 2009). Following guidelines by Hind and Booth (2007), this review differentiates between *publications* and *studies*, where a publication may report results of more than one study, or results of no studies in the case of a theoretical book chapter, for example.

Protocol and registration

In accordance with best practice guidelines (i.e., Liberati et al., 2009; Peters, Godfrey, Khalil, McInerney, Parker, & Soares, 2015) and to outline intended outcomes for transparency, the methodological protocol for this study was submitted for pre-registration in the International Prospective Register of Systematic Reviews (PROSPERO) database. However, due to high demand experienced by PROSPERO, the review could not be registered prior to searches being conducted and analysis being undertaken. The protocol was

developed in line with PRISMA-P reporting guidelines for systematic review protocols (a supplement to PRISMA guidelines for systematic reviews), which are “intended to facilitate the preparation and reporting of a robust protocol for the systematic review” (Moher et al., 2015 p172; Shamseer et al., 2015). The protocol was reviewed by the author’s primary supervisor prior to submission for registration.

Eligibility criteria

Publications were eligible for review if they: a) identified one or more processes used by children or adolescents (defined as under 18 years old) to alter their shame experience at any point in the emotion process; or b) described a process in which children respond to shame. It is likely that a) and b) describe the same processes, because how an individual *responds* to the shame affect will also be an attempt to *regulate* the shame experience, hence relieving the self from the pain associated with shame (the sole exception to this is blushing, which a non-volitional biological marker of the shame affect). However, shame *regulation* and shame *responding* have been differentiated here to overcome a potential methodological confound. Because shame regulation is at present poorly understood, publication authors may describe how individuals *respond* to shame without identifying responses as *regulatory* processes. English-language peer-reviewed articles, book chapters, and unpublished theses were eligible. Both empirical and theoretical publications were eligible for inclusion.

Publications were excluded where the sample or population of interest was not exclusively children (i.e. 18 or over). Also excluded were publications where the sample or population of interest included both children and adults (e.g. 16-21), because it would not be possible to conclude that any identified process(es) would also apply to a child-only population.

Information sources

Electronic searches were applied in the Medline (1976 – Present), PsycINFO (1974 – Present), and Education Source (1993 – Present) databases with no publication year limitations. Databases were chosen in consultation with a university librarian, and selected due to their combined comprehensive coverage of all journals likely to contain publications pertinent to shame and shame regulation.

Search strategy

Due to the infancy of the shame regulation field and a present dearth of agreed, consistent terminology used to describe shame regulatory processes, many different terms have been used in the literature to describe a process of shame regulation. Therefore, as is frequently the case with scoping reviews (Levac, Colquhoun, & O'Brien, 2010), the development of search terms was an iterative process, with multiple iterations of searches piloted in the PsycINFO database (see Appendix A for a summary of search strategy development). Each iteration sought to optimise the specificity, sensitivity, and precision of the strategy. The final search was conducted in all three databases by the review author on 13th August 2019.

Central to any affect regulation process is that it aims to *change* an emotion – that is, increase or decrease the emotion's intensity, duration, latency, and/or offset of responses (Gross, 2014). Thus, where publications may simply describe a process resulting in 'a decrease in shame', the underlying process may be one of shame regulation despite not being labelled by the author(s) as such. Hence, search terms were developed to cast a wide net with the aim of identifying all publications which describe any affect regulation process through which shame is altered in children.

The first step in search term development was to gather synonyms for ‘increase’, ‘decrease’, and ‘adjust’ (the latter describing a change without implied direction). These terms were searched in the electronic Oxford English thesaurus, and all synonyms were selected that could be reasonably expected to be used in an academic setting (non-academic synonyms including ‘upswing’ and ‘mushrooming’ were not selected).

Each of the terms were searched individually in the PsycINFO database following a pilot search syntax (see Table II, Appendix A). The search was limited to English-language results only and those where the sample or population of interest was children. Truncations were used where grammatically sensible to capture various word endings (e.g., ‘increas*’ retrieves ‘increase’, ‘increasing’, and ‘increased’). PsycINFO was chosen due to being the database considered most aligned with the affect regulation field as a psychologically-developed construct. No results were found for the truncations of ‘escalate’ and ‘shorten’ when entered into the syntax; these terms were removed.

Terms known to be commonly used in the affect regulation literature were collated, including ‘regulate’ and ‘dysregulate’. Additionally, as the search process progressed, various other terms arose which could be considered to describe shame regulation processes, including ‘shame management strategies’ (e.g., Nyström & Mikkelsen, 2013), and ‘shame coping styles’ (e.g., Campbell & Elison, 2005). The emergence of such terms also necessitated the iterative approach taken to search term development, where these terms were added to preliminary search term lists to formulate the final search terms (see Table 1).

Table 1

Final search terms and their related affect regulation concepts

Concept	Related terms
Increase	Amplify, elevate, enhance, heighten, increase, inflate, intensify, prolong, strengthen
Decrease	Attenuate, decline, decrease, diminish, lessen, lower, reduce
Otherwise adjust	Adjust, change, control, cope, dysregulate, manage, moderate, modify, modulate, regulate

The final searches were adapted slightly on each database to maximise functionality in inbuilt search tools, such as the use of ‘ti.’, ‘ab.’, and ‘kf.’ commands in Medline to direct the search to titles, abstracts, and keyword heading words, respectively.

In order to increase the precision of the search, a proximity operator was used in both Medline and PsycINFO (this operator is not currently available in Education Source) to limit searches to publications where search terms (e.g., the word ‘decreased’) appeared in the title or abstract within five words of ‘shame.’ For example, a publication using the phrase: ‘shame was decreased following withdrawal’ would be retrieved, because ‘increased’ appears five or less words away from ‘shame’. However, a publication with the phrase: “results showed that children experienced shame. Following CBT treatment, depression scores were decreased” would not be retrieved, because ‘decreased’ is more than five words away from ‘shame’.

In both Medline and PsycINFO, shame is a relatively new subject heading (appearing from 1996 and 1994 respectively). In order to retrieve relevant publications prior to this, it was necessary to add ‘embarrassment’ as a subject heading in Medline, and ‘embarrassment’ and ‘guilt’ as subject headings in PsycINFO. Education Source does not have ‘shame’ as a subject heading. Full searches syntaxes for each database can be found in Appendix B, which were reviewed by a University library specialist and the author’s primary supervisor prior to running the searches.

In order to restrict the search to publications where children comprise the sample and/or population of interest, in-built database restriction tools were used for Medline (all child (0 to 18 years)) and PsycINFO (childhood (birth-12 yrs); adolescence (13-17 yrs)). In Education Source, the age restriction was placed manually by adding another line to the search which included terms related to childhood (e.g., ‘adolescent’).

Publication selection

Candidate publications were collated into an Endnote library. The titles and abstracts of publications sourced from the PsycInfo database ($n = 263$) were screened by two independent reviewers as per best-practice systematic review and meta-analysis guidelines (Deville et al., 2002; Jahan, Naveed, Zeshan & Tahir, 2016; Meline, 2006; Shamseer et al., 2015). Cohen's kappa (Cohen, 1960) was the most appropriate means of assessing inter-rater reliability between raters classifying into categories (i.e., include/exclude). Percentage agreement was also calculated for comprehensiveness (Park & Kim, 2015).

Inter-rater reliability was $\kappa = 0.81$ (97.3% agreement), representing an almost perfect (Cohen, 1960) or strong (McHugh, 2012) agreement. There were seven instances of disagreement, wherein a third independent reviewer (the author's primary supervisor) was consulted, and it was resolved to include two and exclude five of these publications.

Only one reviewer screened the titles and abstracts of non-duplicate Medline and Education Source publications due to budget constraints, however, given the high inter-rater reliability between reviewers for all PsycINFO publications, this approach was not considered to impact negatively on the quality of the selection process. The third independent reviewer was consulted in the case of any uncertainties regarding Medline and Education Source publications.

Reference-checking

To improve the breadth of the literature search, reference lists for all included publications identified in the step prior were reviewed for inclusion as per Cochrane and scoping review recommendations (Horsley, Dingwall, & Sampson, 2011; Peters et al., 2015). All references which included the word 'shame' (or a derivative, e.g., 'shamed') in the title

were collated into a second list of candidate publications, which were subsequently screened against inclusion criteria by the thesis author.

This phase demonstrated support for the comprehensiveness of the initial search strategy. Just one publication which met inclusion criteria that was not identified in the database search emerged from the reference-checking phase (Barrett et al., 1993). However, this was a result of a database discrepancy in the abstract provided rather a function of a non-comprehensive search. Although the abstract provided within the published full-text article contained terms necessary to be picked up by the database search (i.e., proximity of the words ‘regulate’ and ‘shame’), the PsycINFO database provided a different version of the abstract which did not contain these same terms in proximity.

Data collection and data items

Prior to searches being conducted, a standardised data extraction form was developed, adapted from the Cochrane good practice data extraction form template (Higgins & Green, 2011). The form was designed to capture for each publication, where applicable: 1) publication type (e.g., peer-reviewed journal article or unpublished thesis); 2) publication aim(s) and conclusion(s); 3) study participant characteristics, including number of participants, age range, gender, location, ethnicity; 4) methods used to measure shame and shame regulation; 5) foci of shame (e.g., shame-proneness) and context (e.g., shame in a bullying context); 6) terminology used by the authors to describe shame regulation processes; 7) shame regulatory process(es) identified and their effect on the shame experience; 8) gender differences in shame and/or shame regulation process(es) (see Appendix C for the full data collection form).

Following scoping review guidelines (Peters et al., 2015), the form was piloted on three randomly-selected included publications to assess whether any refinements were

required. No new categories were added and none removed. To improve clarity, wording was minimally adjusted in two cases.

The thesis author extracted data from all included publications following the data extraction form. The second reviewer extracted data from five (28%) randomly selected included publications for 28 points of data in each publication (items 8-35 inclusive on the data extraction form; see Appendix C). Data was cross-referenced against the thesis author's data sheet for each of the five publications, and discrepancies were resolved in person by discussion until a consensus was reached. The third reviewer was available to discuss any discrepancies that could not be resolved by discussion, however all discrepancies were successfully resolved in person, so this was not required.

Inter-rater agreement was less straightforward to calculate for data extraction compared to publication selection due to the possibility of slight variation in the data, particularly for qualitative outcomes. Reviewers were considered to agree if the thesis author deemed the fundamental concept extracted was the same (e.g, one reviewer may say "maternal-report questionnaire", and the other "a maternal-report questionnaire to measure how often children displayed shame at home"). Cohen's kappa was not appropriate, given data was not sorted into categories. Percentage agreement between raters was 96.3%.

Quality assessment

In order to assess systematically the quality of all included empirical studies, a tool was developed to assess the a) the participant sampling technique; b) the validity and appropriateness of shame and shame regulation measurement tools (where used), and; c) the use of blinding in the research design. Items were developed by the author in consultation with the primary supervisor, and informed by the Risk of Bias Assessment Tool for Nonrandomized Studies (Kim et al., 2013). The quality assessment tool can be found in Appendix C.

Results

Publication Selection

The literature search yielded 720 candidate publications for abstract review. The search strategy retrieved 320 candidate publications in the PsycINFO database, 284 in Medline, and 116 in Education Source.

After duplicates were removed and abstracts screened against inclusion criteria, 18 unique publications remained which met inclusion criteria, published between 1993 and 2017 (see Appendix D). The flow of publication selection is summarised in Figure 3 (Moher, Liberati, Tetzlaff, & Altman, 2009).

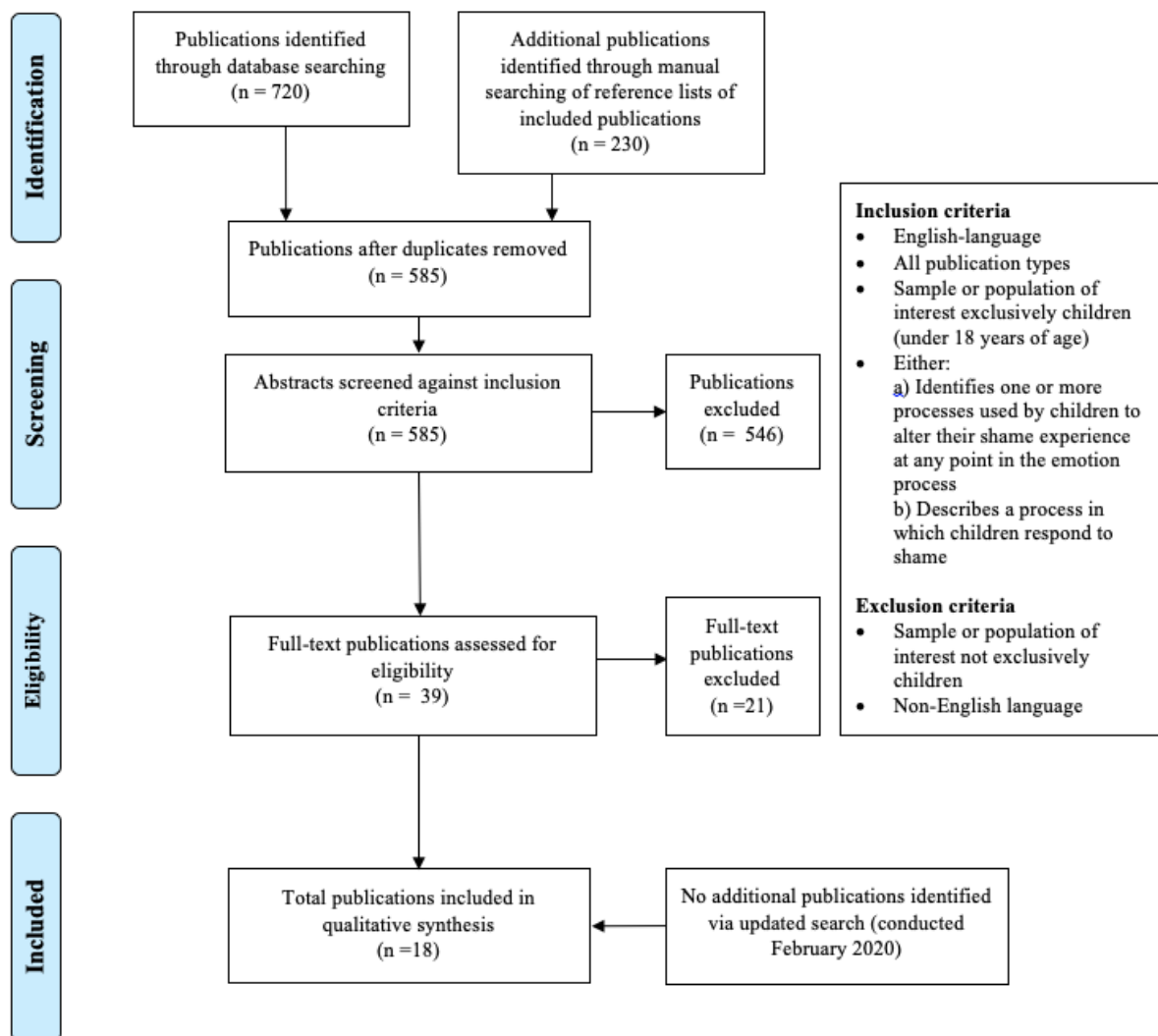


Figure 3. PRISMA flow-chart of publication selection process

Publication Characteristics

Main characteristics of the eighteen included publications and their samples, where relevant, are described in Table 2 and Appendix D. Thirteen empirical peer-reviewed journal articles, two empirical theses, two non-empirical book chapters and one non-empirical peer-reviewed journal article were included. The 15 empirical publications represent data from 16 studies (Berti et al., 2000, presents two studies, one of which is relevant to the current review). Study sample sizes varied from nine (Jarc, 2004) to 1875 (Ahmed & Braithwaite, 2006). Participant characteristics (age, ethnicity) ranged across studies. Almost all studies had a fairly equal gender representation, with the exception of Ahmed and Braithwaite (2006) whose large sample was skewed to female respondents (60%). Samples were drawn from a variety of countries, although a majority (12; 67%) were conducted in developed countries where the population was largely European, or of European descent. The populations of interest demonstrated that studies covered a range of developmental stages in childhood. Participants of publications included in this review involved a total of 6732 children, ranging in age from 25 months to 16 years. Any study which included 17 year olds also included individuals over 18, and hence was excluded (these included Meier, 2003; Schalkwijk, Stams, Dekker, Peen, & Elison, 2016; Vagos, Ribeiro da Silva, Brazão, Rijo, and Elison, 2019).

Aims, conclusions, and contexts of the publications indicate the diversity of situations within which shame regulation has been examined, both in everyday situations such as interpersonal relationships (Jarc, 2004) and achievement (Smiley et al., 2016) to traumatic contexts such as sexual abuse trauma (Namka, 1995). Half of publications did not mention shame in the aim (Okur & Corapci, 2016) or conclusions (Ahmed & Braithwaite, 2006; Barrett et al., 1993), or both (Ahmed, 2008; Ahmed & Braithwaite, 2004; Cole et al., 2009; McCaslin, et al., 2016; Ross, 2017; Ttofi & Farrington, 2008), which suggested shame was not a central focus of the publication.

SHAME REGULATION STRATEGIES USED BY CHILDREN AND ADOLESCENTS

Table 2

Participant characteristics for included empirical studies

Author(s)	n	Gender	Age ^a or grade	Ethnicity
Ahmed (2006)	365	163 (44.7%*) male; 180 (49.3%*) female; 22 missing data	<i>M</i> age = 13.50, <i>SD</i> = .87, range: grades 7-10	n/s; sample drawn from Australia
Ahmed (2008)	1452	51% male; 49% female	<i>M</i> grade = 8.42 range: grades 7-10	n/s; sample drawn from Dhaka, Bangladesh
Ahmed & Braithwaite (2004)	1401 students & 978 primary caregivers	54% female (no other information given); 89% of primary caregivers were mothers.	<i>M</i> age = 10.86, <i>SD</i> = .90	n/s; sample representative of ethnic diversity in region: “25% sample born in either a non-English-speaking country or in an English-speaking country with one or both parents born in a non-English-speaking country” (p. 274)
Ahmed & Braithwaite (2006)	1875	40% male; 60% female (no absolute numbers given)	<i>M</i> age = 8.28, range: grades 7-10	n/s; sample drawn from Bangladesh
Barrett, Zahn-Waxler, & Cole (1993)	44 children & their mothers	22 (50.0%*) male; 22 (50.0%*) female	<i>M</i> age = 29.98 months, range = 25–36 months	Predominantly Caucasian
Berti, Garattoni, & Venturini (2000)	60	30 (50.0%*) male; 30 (50.0%*) female	<i>n</i> =20 kindergarten children: <i>M</i> age = 5.6; range: 5.4-6.4 <i>n</i> =20 second grade children: <i>M</i> age = 7.8; range: 7.5-8.6 <i>n</i> =20 fourth grade children: <i>M</i> age = 9.10; range: 9.5-10.3 <i>M</i> age = 9.1*; range: 7-11	n/s; sample drawn from Italy
Jarc (2004)	9	5 (55.6%*) male; 4 (44.4%*) female		Hispanic: <i>n</i> = 4 (44%*); Caucasian: <i>n</i> = 3 (33%*); both Hispanic and Caucasian: <i>n</i> = 2 (22%*)
McCaslin, Vriesema, & Burggraf (2016)	413 at T1a; 472 at T2	209 (50.6%*) male; 202 (48.9%*) female; 2 unknown at T1; 244 (51.7%*) male; 225 (47.7%*) female; 3 unknown at T2	Range: grades 4-6	n/s; sample drawn from United States of America
Morrison (2006)	343	163 (47.5%*) male; 180 (52.5%*) female	<i>M</i> age = 13.5, range = 12-16	n/s; sample drawn from Australia
Okur & Corapci (2016)	123	62 (50.4%*) male; 61 (49.6%*) female	61 third graders: <i>M</i> age = 8.70; <i>SD</i> = .38 62 fifth graders: <i>M</i> age = 10.9; <i>SD</i> = .50	All participants described as Turkish
Ross (2017)	80	37 (46.3%*) male; 43 (53.8%*) female	<i>M</i> age = 48.4 months, range = 36-59 months	Predominantly Caucasian

SHAME REGULATION STRATEGIES USED BY CHILDREN AND ADOLESCENTS

Author(s)	n	Gender	Age ^a or grade	Ethnicity
Smiley, Buttitta, Chung, Coffey, Wang, & Borelli (2016)	79	36 (45.6%*) male; 43 (54.4%*) female	<i>Age not reported for this sample, but larger study from which sample was drawn:</i> <i>Mage</i> = 11.50; <i>SD</i> = 1.43; range: 9-14	Parents of participants: Hispanic: 40%; White (Non-Hispanic): 28%; African-American: 22%
Stern (1999)	125	61 (48.8%*) male; 64 (51.2%*) female	<i>Mage</i> = 11.9* range: 10.4*–13.1*	White: n = 97, 77.6%; Asian-American: n = 10, 8%; Hispanic: n = 6, 4.8%; African-American: n = 3, 2.4%; American/Alaskan Native: n = 2, 1.6%; Biracial: n = 7, 6%
Thomaes, Stegge, & Olthof (2007)	122	57 (46.7%*) male; 65 (53.3%*) female	<i>Mage</i> = 11.6 <i>SD</i> = 0.67	Caucasian
Ttofi & Farrington (2008)	182	91 (50.0%*) male; 91 (50.0%*) female	Range: 11-12	n/s; sample drawn from Nicosia, Cyprus

Note: n/s = not stated

* percentage (rounded to 1 decimal place) calculated by thesis author where not provided to allow comparison across studies

^a age in years unless specified otherwise

^b 36 following categorisation process and elimination of invalid Thurston-Cradock Test of Shame test

Most studies considered state shame. Chronic shame (Cole et al., 2009; Namka, 1995), and shame-proneness (Stern, 1999) were also examined, and Jarc (2004) examined several shame foci: body shame, relationship shame, competence shame, and general shame.

Assessment of shame and shame regulation

A variety of methods were used to assess both shame and shame regulation. These are listed in Table 3, alongside an indication of the validity of each method. ‘Validity’ here refers to whether a method’s psychometric properties (i.e., reliability and/or validity) have been investigated, rather than an indication of the *quality* of a method’s psychometric properties. However, even if validation has been assessed (e.g., internal consistency, construct validity), the instrument still may not be very accurate (i.e., valid and reliable).

Nine of the 15 publications measured both shame and shame regulation; all assessed shame regulation. Many studies used methods with unknown or questionable psychometric properties, including many studies using non-validated measures developed for the study. Tools assessing shame regulation frequently relied on self-report of predicted behaviours in hypothetical vignettes. As such, their ecological validity is unknown. Three studies (Ahmed & Braithwaite, 2004; McCaslin et al., 2016; Stern, 1999) used validated self-report tools to measure participants’ shame. In the studies by Ross (2017) and Smiley et al. (2016), authors observed and coded shame-relevant behaviours against frameworks. These frameworks were strongly informed by prior research, and, as such, these methodologies can be appraised as ‘somewhat’ validated. All other studies assessing shame itself used methodology developed for that study, and hence were not validated.

Five studies (Ahmed, 2006, 2008; Ahmed & Braithwaite, 2004, 2006; Morrison, 2006) used Ahmed’s (2001) Management of State Shame – Shame Acknowledgement Shame Displacement (MOSS-SASD) scale, or validated modifications thereof, to measure shame regulation (described as ‘shame management’ in all aforementioned studies; see Table 5). .

SHAME REGULATION STRATEGIES USED BY CHILDREN AND ADOLESCENTS

Table 3

Shame measurement and measurement quality assessment

Author(s)	Shame		Shame regulation	
	Assessment method	Method validated?	Assessment method	Method validated?
Ahmed (2006)	n/a	n/a	Modified ^a MOSS-SASD (Ahmed, 2001)	Yes
Ahmed (2008)	n/a	n/a	Bengali version of the MOSS-SASD (Ahmed, 2001)	Yes
Ahmed & Braithwaite (2004)	Test of Self-Conscious Affect for Children (TOSCA-C; Tangney, Wagner, & Gramzow, 1990)	Yes	MOSS-SASD (Ahmed, 2001)	Yes
Ahmed & Braithwaite (2006)	n/a	n/a	Bengali version of the MOSS-SASD (Ahmed, 2001)	Yes
Barrett et al. (1993)	Author-developed maternal-report questionnaire	No	Coding of behaviours against author-developed framework	No
Berti et al. (2000)	Author-developed interview schema	No	Author-developed interview schema	No
Jarc (2004)	All measures author-developed: 1. Child Shame Profile Checklist 2. Shame Behavior Frequency Checklist 3. Interview schema 4. Identification and transformation drawing tasks	None (of 4)	Both measures author-developed: 1. Interview schema 2. Identification and transformation drawing tasks	None (of 2)
McCaslin et al. (2016)	School Situations Inventory (Burggraf, 1993)	Yes	Exploratory factor analysis conducted on School Situations Inventory	Yes
Morrison (2006)	n/a	n/a	MOSS-SASD (Ahmed, 2001)	Yes
Okur & Corapci (2016)	Author-developed interview schema involving vignettes	No	Interview schema involving vignettes; expectations of emotion response coded into categories based on previous research	Somewhat
Ross (2017)	Behaviours coded to framework based on previous research (Stipek et al 1992) in a “beat the buzzer” paradigm (Lewis, Alessandri, & Sullivan, 1992) and a mishap paradigm	Somewhat ^b	Correlations between achievement shame and prosocial choice variables	No
Smiley et al. (2016)	Facial expressions and head, body, and verbal cues coded against modified version ^c of AFFEX coding system for infants (Izard & Dougherty 1980)	Somewhat	ANCOVA to test relationship between verbalised strategy use (i.e., task engagement) and the two emotion groups (anger vs. shame/sadness)	No
Stern (1999)	1. Critical Events Interview 2. Modified ^d Test of Self-Conscious Affect for Children (TOSCA-C) (Tangney, Wagner, Burggraf, Gramzow, & Fletcher, 1990)	No Yes	Modified ^e Coping Scale for Children and Youth (Brodzinsky et al. 1992)	Yes

SHAME REGULATION STRATEGIES USED BY CHILDREN AND ADOLESCENTS

Author(s)	Shame		Shame regulation	
	Assessment method	Method validated?	Assessment method	Method validated?
Thomaes et al. (2007)	n/a	n/a	1. Scenario-based self-report instrument to assess children's propensity to employ externalising shame responses 2. Peer-nominations collected for externalising shame responses 3. Self-report – children judged themselves on the peer nominations items	Somewhat (for all 3 methods)
Ttofi & Farrington (2008)	n/a	n/a	Researcher-developed questionnaire including vignette, based on Reintegrative Shaming Theory and previous research on neutralisation techniques	Somewhat

Note:

^a Modified via factor analytical procedure – reducing 15 dimensions to 4

^b 'Somewhat' validated where coding framework based on previous research, but lack of consensus in prior research on how to operationalise the emotions, and thus approach taken in considering whether children had shown shame is not validated

^c Modified to be suitable for preadolescents

^d Behavioural responses indicative of shame changed to cognitive-affective responses, and two additional questions added to each scenario regarding perceived controllability over situation and internal attribution. Internal consistency high (Cronbach's $\alpha = .77$)

^e Wording adjusted to reflect prior coping rather than general coping style, 4 items added to assess aggressive responding (selected from pilot study), ten items deleted from original scales

This tool is designed to categorise shame responses into the factors of *shame acknowledgement* and *shame displacement*, and has been shown to have good reliability and validity (Ahmed, 2001). Beyond those studies using the MOSS-SASD, two of the included studies (McCaslin et al., 2016; Stern, 1999) used validated methods of assessing shame regulation. The remaining eight studies used author-developed shame regulation methods, five of which were not validated. Three were somewhat validated. For example, Thomaes et al. (2007) calculated the internal consistency of their three author-developed measures (Cronbach's α for the peer-report measure was excellent at .92; the two self-report measures had questionable and acceptable internal consistency at .60 and .76, respectively).

Only three studies used statistical methods (e.g., correlations, ANOVA) to analyse the relationship between shame-regulation-relevant variables (McCaslin et al., 2016; Ross, 2017; Smiley et al., 2016) and no studies assessed the effect of shame regulation process(es) on shame itself

Quality Assessment

Results of the quality assessment are presented in Table 4. Common methodological limitations related to the assessment of guilt and shame frequently relying on non-validated methods, use of a convenience sampling technique, sample characteristics, and lack of or limited blinding (where applicable). Methodological strengths included that all measurement methods were appropriate to the study's sample and research question.

Regarding the samples, eight studies did not report the sampling technique used to recruit participants. Ethics and practicality evidently necessitated the convenience sampling technique used in all but one of the studies for which this information was available, and thus self-selection bias is a methodological constraint. The exception was Ahmed (2006), where participants self-selected to participate from a randomly selected student sample.

Additionally, demographic information was not available for all studies (most frequently ethnicity), which limits the generalisability of results.

Blinding was not applicable to most study designs. Of the five where blinding was applicable (Barrett et al., 1993; Berti et al., 2000; Okur & Corapci, 2016; Ross, 2017; Smiley et al., 2016), three used blinding, and all used two or more assistants to code behaviours, achieving adequate to excellent reliability between coders (Barrett et al., 1993; Berti et al., 2000; Okur & Corapci, 2016). The most comprehensive example of blinding was found in Barrett et al. (1993), where assistants were naïve to hypotheses and participant grouping criteria. This blinding was successful to the extent that no assistants guessed the context within which participants were grouped. The quality of the two studies which did not use blinding is compromised, and blinding is limited in the study by Berti et al. (2000), where the coders were blind only to the age of the child.

All but two studies (Ahmed, 2008; Ahmed & Braithwaite, 2006) detailed limitations to their methodologies, commonly citing sampling, study design, and measurement tools as limitations. Strengths, reported by authors in just four studies (Ahmed, 2006; Ahmed & Braithwaite, 2004; Jarc, 2004; Smiley et al., 2016) included the use of a real-life task situation, objective assessment of behaviours, sampling scope, and an exploratory study design.

Finally, in two instances, authors assumed reparative behaviour and spontaneous help (Ross, 2017), and verbalised strategy use (Smiley et al., 2016) acted as a direct proxy for withdrawal. However, these behaviours are unlikely to map onto withdrawal without confounds. For example, strategies children can express verbally may not be directly correlated to the number of strategies they are employing (the authors identify this as a limitation; Smiley et al., 2016).

SHAME REGULATION STRATEGIES USED BY CHILDREN AND ADOLESCENTS

Table 4

Quality assessment for included empirical publications

Author(s)	Was the sample representative? If no, what was the sampling technique?	Was blinding used in the research design?	Strengths as identified by authors	Limitations as identified by authors
Ahmed (2006)	No; self-selection from randomly selected students	n/a	1. Scope of recruitment strategy 2. Longitudinal design	1. Sample size – larger size would have provided greater power 2. Data collection – reliance on self-report 3. Design could be improved by collecting data at more than 2 time points, and by improving response rate at time 2
Ahmed (2008)	No; convenience sampling	n/a	n/s	n/s
Ahmed & Braithwaite (2004)	No; convenience sampling	n/a	1. Large and heterogeneous sample 2. Shame management perspective unique in understanding bullying etiology 3. Parental shaming measures included alongside child shame-management measures	1. Self-selection sampling method 2. Limited measurement and attention to context 3. Design could be improved by including assessment of children's perceptions of shaming, and conceptualising school's responses to bullying in shaming and shame management terms
Ahmed & Braithwaite (2006)	No; convenience sampling from regions "targeted on the basis of their representativeness of the socioeconomic diversity of urban and suburban communities" (p. 356)	n/a	n/s	n/s
Barrett et al. (1993)	Unclear; not reported	Yes _a	n/s	1. None of the behaviours used as outcomes was specific to guilt or shame alone; there was overlap across emotions 2. Unable to conclusively demonstrate true guilt and shame experienced 3. Not all shame-relevant variables reliably distinguished Avoiders from Amenders
Berti et al. (2000)	Unclear; not reported	Yes _b	n/s	Meaning of Italian word <i>vergogna</i> and the English <i>shame</i> do not completely overlap
Jarc (2004)	No; convenience sampling	n/a	Exploratory design intended to overcome limitations of previous research and capture undiscovered richness of shame experiences	1. Qualitative methodology limits generalisability of findings 3. Reliance on new, exploratory measures without substantial literature support
McCaslin et al. (2016)	No; convenience sampling	n/a	n/s	1. School Situations Inventory represents hypothetical situations – ecological validity unknown 2. Unknown if rational numbers achievement task successfully primed students with concern for mistake-making 3. Reliance on verbal-report data

SHAME REGULATION STRATEGIES USED BY CHILDREN AND ADOLESCENTS

Author(s)	Was the sample representative? If no, what was the sampling technique?	Was blinding used in the research design?	Strengths as identified by authors	Limitations as identified by authors
Morrison (2006) Okur & Corapci (2016)	No; convenience sampling Unclear; not reported, sample randomly assigned to conditions	n/a Yes ^c	n/s n/s	4. Emotion regulation reports may over-represent actual capabilities 5. Self-selection sampling strategy Direction of causation unclear 1. Low number of hypothetical vignettes 2. Sample size lacked statistical power 3. Dichotomous measure used to assess emotion expression 4. Unknown generalisability of findings to areas outside metropolitan Turkey
Ross (2017)	Unclear; not reported	No	n/s	1. Possible that children simply responded positively to good outcomes and negatively to bad outcomes 2. Unclear direction between prosociality and the self system
Smiley et al. (2016)	Unclear; not reported	Unclear	1. Real-life failure task used to measure performance under challenge, participants trained on solution strategies and asked to announce these as used 2. Discrete emotion assessed through objective assessment of facial displays 3. Socialisation of emotion suppression assessed with both positive and negative conditional regard	1. Task engagement measured by tallying number of strategies children described verbally 2. AFFEX coding scheme validated for use with strong elicitors, but current study used relatively mild failure experience 3. Measurement of parent use of positive and negative conditional regard reliant on child self-report collected at one point in time
Stern (1999)	Unclear; not reported (convenience sample)	n/a	n/s	1. Preadolescent sample taken from a normal school population may have confounded findings 2. Reliance on retrospective events 3. Presence of other emotions in may have acted as a confound 4. Cross-sectional design means direction of causality (between shame-proneness, avoidant and aggressive coping, and depression) is unclear
Thomaes et al. (2007)	Unclear; not reported	n/a	n/s	1. Data does not describe children's actual behaviours when faced with real-life shameful event 2. Cross-sectional design does not allow developmental inferences to be drawn
Ttofi & Farrington (2008)	Unclear; not reported, schools randomly selected	n/a	n/s	1. Sample size of 182 2. Cross-sectional design 3. Use of just 1 vignette

Note: n/s = not stated; n/a = not applicable

^a Coders blinded to both experimental hypotheses and to the classification system used to dichotomise subjects

^b Coders blind to the children's ages

^c Coders blind to child characteristics and study hypotheses

Main Findings

All outcomes pertinent to shame regulation are displayed in Table 5.

Shame regulation. There was substantial variability across publications in the process children used to regulate and respond to shame, however, some themes emerged.

Three studies listed just one shame regulation process, which was identified as a singular static variable in the respective study methodologies. Barrett et al. (1993) and Cole et al. (2009) assessed avoidance only and Thomaes et al. (2007) explored externalising responses. These narrower approaches are in contrast to more exploratory approaches taken in Berti et al. (2000) and Jarc (2004), where children were given an open scope to report how they would respond to and/or regulate shame. Smiley et al. (2016) hypothesised that experiencing shame or sadness, rather than anger, would predict task withdrawal in an achievement context. However, no support was found for this hypothesis, and thus this publication did not outline a shame regulatory process per se; rather it demonstrated the absence of support for withdrawal following shame in an achievement context.

Distancing-type processes, including withdrawal, hiding, and avoidance, were listed in 11 of the publications. Externalising-type processes such as aggression and anger were listed in eight publications. There was a discrepancy in the publications as to whether approach-type processes, including problem resolution, assistance seeking, and positive confrontation with the shaming other, were considered processes children used to regulate and respond to shame. In their theoretical exploration of emotion dysregulation, Cole et al. (2009) argued that shame was not associated with problem resolution. In Stern's (1999) empirical work, shame-proneness was not found to be significantly correlated with problem-solving or assistance-seeking. Additionally, Ross (2017) found achievement shame negatively predicted reparative behaviour and spontaneous help, although moral shame was not significantly correlated with either response. In contrast, in both studies where children

SHAME REGULATION STRATEGIES USED BY CHILDREN AND ADOLESCENTS

Table 5

Shame regulation outcomes

Author(s)	Regulation process(es) OR Process(es) by which children respond to shame	Terminology to describe shame regulatory process(es)	Gender difference in shame and/or regulatory process(es)
Empirical Publications			
Ahmed (2006)	Shame acknowledgement: Feeling shame, hiding self, taking responsibility, making amends, anger at self; Shame displacement: Externalising blame, unresolved feelings, anger at others, retaliatory anger, displaced anger; Internalising shame: Viewing rejection from others, self-abusive feelings; Shame avoidance: Laughing it off, denial of event, feeling nothing happened, making a joke of the event	Shame management skills	n/s
Ahmed (2008)	Shame acknowledgement: Admitting shame and wrongdoing, taking responsibility and making amends for the wrongdoing, expressing remorse; Shame displacement: Blaming others, expressing anger towards others, other externalising reactions	Shame management skills	n/s
Ahmed & Braithwaite (2004)	Shame acknowledgement: Feeling shame, feeling like hiding oneself, taking responsibility, facing up to others' rejection, making amends; Shame displacement: Externalizing blame, having unresolved shame, feeling anger, retaliatory anger, displaced anger	Shame management	n/s
Ahmed & Braithwaite (2006)	Shame acknowledgement: Feeling shame, taking responsibility, making amends; Shame displacement: Externalizing blame, felt anger, retaliatory anger, and displaced anger	Shame management	n/s
Barrett et al. (1993)	Avoidance behaviour: Avoid the experimenter, show embarrassment, and are slow to a) repair, b) tell the experimenter about mishap, and c) look at the experimenter	Shame-relevant behaviours	Significantly more girls showed shame-relevant behaviour than boys
Berti et al. (2000)	How to make the emotion pass: Doing or thinking nice things, hiding or escaping, asking for help, forgetting or distraction, facing the situation, repairing, nothing can be done Action tendencies: Escaping or hiding, crying or doing nothing, withdrawing, doing nice things or seeking comfort, repairing	Action tendencies; emotion regulation; strategies for coping; "how to make the emotion pass" (p. 310)	No significant differences found
Jarc (2004)	Coping with shame experiences: Proactive solutions: Shame lessened by taking care of the physical body (e.g., getting a drink or snack), restoring interpersonal bridge (e.g., asking for support from parents, trying to fix the problem), positive confrontation with shaming other (e.g., assertively tell the other person one felt ashamed, apologising, making amends); Avoidant, passive responses: Disregard shaming person entirely or find positive alternative relationships to replace them, hiding, distraction or engaging in another	Coping with shame feelings; transformation of shame; "coping strategies for dealing with shame," (p. 9)	a) males denied feeling shame, were unclear about how to describe such experiences, and/or generally felt relatively comfortable with the self; b) females readily admitted that they had experienced shame, gave solid and emotional examples of their experiences, transformed original

SHAME REGULATION STRATEGIES USED BY CHILDREN AND ADOLESCENTS

Author(s)	Regulation process(es) OR Process(es) by which children respond to shame	Terminology to describe shame regulatory process(es)	Gender difference in shame and/or regulatory process(es)
	activity (e.g., reading a book), taking space away from the situation, aggression (e.g., yelling, teasing, swearing, fighting, seeking revenge) towards shaming other, engaging in negative self-talk Defence mechanisms to ward off further shame: Avoidance, denial, isolation of affect, reaction formation		shame scene so that they were reunified with the same people who had actually shamed them c) Females acknowledged more shame; d) Females reported experiencing shame at a deeper level
McCaslin et al. (2016)	Distance and displace; inadequate and exposed	Coping strategy; “...how students experience (generate) and cope with (regulate) self-conscious emotions,” (p. 1) Shame management	n/s
Morrison (2006)	Shame acknowledgement: Acknowledge harmful behaviour to others, acknowledge feelings of shame, take responsibility for harm done, make amends Shame displacement: n/s		n/s
Okur & Corapci (2016)	Expressing shame, hiding shame	n/s	Odds of shame expression were 3.6 times greater for girls than boys
Ross (2017)	Withdrawal; achievement shame negatively predicts reparative behaviour & spontaneous help	n/s	n/s
Smiley et al. (2016)	Authors hypothesised shame would predict task withdrawal. However, no significant difference found between anger vs. shame/sadness groups in task engagement as measured by verbalised strategy use	n/s	n/s for shame
Stern (1999)	Behavioural avoidance, cognitive avoidance, aggression. Shame-proneness not significantly associated with problem-solving or assistance-seeking.	Coping strategies used to manage shame feelings	No significant differences found in: a) shame-proneness, b) behavioural avoidance, c) cognitive avoidance, d) aggression. Girls sought assistance significantly more than boys.
Thomaes et al. (2007)	Externalising (responding with anger or aggression)	Shame responding; self-regulation strategies	Boys scored marginally or significantly higher than girls on the three externalizing shame response measures
Ttofi & Farrington (2008)	Shame acknowledgement: Responsibility for the wrongdoing, shame over the wrongdoing, and desire to make amends. Shame displacement/unacknowledged shame: Denial of responsibility, condemnation of the condemners	Shame management techniques; neutralization techniques	n/s

Non-empirical publications

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Author(s)	Regulation process(es) OR Process(es) by which children respond to shame	Terminology to describe shame regulatory process(es)	Gender difference in shame and/or regulatory process(es)
Barrett (1998)	Behaviour-regulatory functions: Distance self from evaluating others; reduce 'exposure'; Social-regulatory functions: Communicate deference/submission; communicate self as 'small' or inadequate; Internal-regulatory functions: Highlight rules, standards, goals; aid in acquisition of self as object and, to some extent, self as agent; reduce arousal; Action-tendency: Withdrawal, avoidance of others, hiding of self	Behaviour-regulatory functions; social-regulatory functions; internal-regulatory functions; action-tendencies	n/s
Cole, Hall, & Radzioch (2009)	Avoidance, not problem resolution	Emotion regulation	n/s
Namka (1995)	Recognize the uncomfortable feelings, discuss the upsetting incident in terms of transfer of negative feelings, distinguish between the global negative self-beliefs specific to the situation, use imagery to give mastery over internalised negative feelings	Deal with shame; process of shame release; shame removal; shame reduction	n/s

Note: n/s = not stated

^a Ordered by frequency

^b For achievement shame only

were given free and open scopes to generate solutions to hypothetical shame scenarios, children suggested they could respond by facing the situation, asking for help or support, and with positive confrontation with the shaming other (Berti et al., 2000; Jarc, 2004). Additionally, the MOSS-SASD shame acknowledgement factor included taking responsibility and making amends, and Namka (1995) listed recognising the shame feeling as part of therapeutic shame reduction techniques

A two-level hierarchical distinction emerged in eight of the publications, whereby conceptual descriptors (e.g., shame acknowledgement) were followed by specific processes or other behaviours (e.g., taking responsibility). In these publications, conceptual descriptors could be considered to be grouping terms for more specific processes or other behaviours. However, where present, this hierarchy was not consistent across publications. For example, Jarc (2004) listed avoidance as a specific process under the conceptual descriptor “defense mechanisms to ward off further shame,” (p. 295), whereas Barrett et al. (1993) offered avoidance as a conceptual descriptor, subordinate to which were specific processes and behaviours, such as time taken to look at the experimenter. Additional to these eight publications, there were three levels to the processes described in Jarc (2004). The conceptual descriptor of ‘coping with shame experiences’ was split into proactive solutions and avoidant, passive responses, each of which was followed by a more specific processes, which were the most specific behavioural examples given across publications.

Terminology. Like the shame regulation processes, terminology used to describe shame regulation processes varied substantially across publications. Of particular note, none of the included publications used the term ‘shame regulation’. Several publications used a variety of

disparate terms, and three did not offer any specialist terminology at all to refer to the shame-changing processes described.

‘Shame management’ was adopted by all five studies using the MOSS-SASD. ‘Coping’ was used in four publications (Berti et al., 2000; Jarc, 2004; McCaslin et al., 2016; Stern, 1999).

Gender differences. Six of the studies reported on gender differences. Regarding shame itself, Stern (1999) found no gender difference in shame-proneness. Barrett et al. (1993) found female toddlers were more likely to show state shame-relevant behaviours than males in response to a mishap paradigm. Shame-relevant behaviour was classified by the behavioural responses to the mishap, with shame-relevant behaviour distinguished by avoidance behaviour (compared to guilt-relevant behaviour, distinguished by amend-making). Additionally, in a sample of 123 Turkish children, Okur and Corapci (2016) found the odds for the expression of state shame were significantly higher for girls than boys in response to hypothetical vignettes. Jarc (2004) reported girls generally acknowledged more shame, and experienced this at a deeper level compared to boys, who typically denied feeling shame.

Of the four studies which reported gender differences in shame regulation and responses to shame, one study (Berti et al., 2000) found no significant gender differences in children’s self-reports of shame action tendencies and regulatory processes. Stern (1999) also found no gender differences in behavioural and cognitive avoidance and aggression in response to shame, but found girls were significantly more likely than boys to seek assistance. However, Thomaes et al. (2007) reported boys were more likely to respond to shame by externalising (i.e., showing anger or aggression) in an adolescent sample. Jarc (2004) found girls generally repaired shame scenes to make amends with a shaming other in an author-developed drawing task, however, these findings were indicative only, given the qualitative design of this study.

Discussion

Narrative synthesis of the results revealed substantial variation across all key review outcomes (for which there was information available) i.e., in the strategies children and adolescents used to regulate shame, terminology used to describe processes, and in gender differences in strategy use. Shame regulation strategies were closely aligned with those in Nathanson's compass of shame (*attack self, withdrawal, attack other, avoidance*), and with *adaptive* or *approach* responses (Schalkwijk, Stams, Dekker, Peen, & Elison, 2016), within which support for two discrete strategies was observed: *soothe self* and *restore relationship(s)*. No publication included in this review examined the effect of any strategy on the experience of shame.

Terminology

The most commonly-used terms found in this review were *shame management* and *coping* (e.g., *coping strategies, shame coping styles*). Both are problematic. *Management* implies that the object to be managed is “something difficult” (Oxford University Press, n.d., Collins Online Dictionary, n.d., Cambridge Dictionary, n.d.). Although feeling shame is painful and unpleasant (H. B. Lewis, 1971; M. Lewis, 1992; Nathanson, 1994, 1987a, 1987b; Tomkins, 1963), small amounts of shame are fundamental to normal development (M. Lewis, 1993; Schore, 2019a), and its successful regulation is linked to an individual's perception of the self as competent and adequate (Izard, 1997). Additionally, *management* has a connotation of being a deliberate, conscious process; yet shame regulation can be non-volitional and automatic (Nathanson, 1994). *Coping* with affect typically involves the reduction of negative affect, is primarily applied over an extended period of time (e.g., coping with bereavement; Gross, 2014), and also carries the same implication that the object to be coped with is “difficult” (Oxford

University Press, 2019). Thus *coping* a) omits that shame is not necessarily maladaptive itself, b) does not account for maladaptive regulatory processes which may *increase* shame, and c) does not take into account that shame is typically a transient state which may be regulated swiftly (with the exception of those who experience chronic shame; DeYoung, 2015).

Individuals' *responses* to shame, whether affective, behavioural, or cognitive, all function to *regulate* shame (with the exception of blushing), typically activated to down-regulate shame and thus release one's self from the pain and unpleasantness so intrinsic to experiencing shame. Thus *responses to shame* and *shame regulation* describe, in essence, the same processes. At present, authors may write in terms of *responses to shame* or *shame responding* without identifying processes as regulatory strategies because of a lack of widespread understanding of shame regulation. However, *shame responding* suggests a reference to that which happens *following* shame, rather than what might happen *to* shame, and does not capture the effect of such processes on experiential shame.

The present diversity in terminology used to describe shame regulation impedes the progression of this field by hindering accurate comparison of results across research. Standardised nomenclature facilitates coherent understanding and communication in future endeavours, and encourages the adoption of a congruent theoretical framework. Thus, the application of a standardised terminology is of paramount importance. *Shame regulation* is an accurate, unambiguous term to describe the mechanisms through which one modulates shame in its intensity, timing, valence, and expression. *Regulation* does not ascribe an assumption about whether the affect is adaptive or maladaptive, positive or negative, nor in which direction it may be changed (i.e., increased or decreased). Further, *regulation* encompasses unconscious, automatic processes and conscious, deliberate processes. This term allows the adoption of affect

regulation theory (Schorer, 1994, 2003a, 2003b, 2012) as a guiding theoretical framework, which greatly aids the study of shame regulation in development because of its comprehensive integration of biopsychosocial factors and descriptions of the neurobiological process which underlie these processes, as well as its grounding in child development and attachment theory. Thus, based on the above rationale, a key recommendation from this thesis is the adoption of the term *shame regulation* in future research endeavours in this field.

Shame Regulation Strategies

Many of the identified shame regulation strategies align with those described in Nathanson's compass of shame: *attack self*, *withdrawal*, *attack other*, *avoidance* (and subsequently in the Compass of Shame Scale; Elison, Lennon, & Pulos, 2006), which also map on to Schoenleber and Berenbaum's (2012) framework of shame regulation strategies in personality pathology. They are also reflective of two of Izard's (1997) three descriptions of shame defence mechanisms. Izard's *denial* (i.e., of the existence or importance of shame, or denial of shame itself), and *repression* (i.e., forgetting, removing from consciousness) are reflected in both Nathanson's *attack other* and *avoidance*, both of which involve denial or rejection of shame's painful message (Elison, Lennon, & Pulos, 2006). Table 6 demonstrates the theoretical alignment of shame regulation strategies identified in this review with strategies described in extant theories.

It was not possible to conclude whether age differences in regulation strategies exist, because the included publications varied substantially in both the strategies identified and in the age range of participants or population of interest. As such, not every strategy was explored at each age (e.g., no study with participants under 5 years assessed *attack self* or *attack other*

Table 6

Alignment of strategies identified in review with strategies described in extant theory

Strategies identified in present review	Compass of Shame ^a	Schoenleber & Berenbaum (2012)
<ul style="list-style-type: none"> • Withdrawal (Ross, 2017) • Withdrawing, hiding or escaping (Berti et al., 2000) • Withdrawal, hiding of self, avoidance of and distancing self from evaluating others (Barrett, 1998) • Hiding (Jarc, 2004) 	Withdraw	Escape
<ul style="list-style-type: none"> • Internalising shame: Viewing rejection from others, self-abusive feelings (Ahmed, 2006) • Engaging in negative self-talk (Jarc, 2004) 	Attack self	Self-directed aggression
<ul style="list-style-type: none"> • Avoidance behaviour: Avoid the experimenter, show embarrassment, and is slow to a) repair, b) tell the experimenter about mishap, and c) look at the experimenter (Barrett et al., 1993) • Shame avoidance: Laughing it off, denial of event, feeling nothing happened, making a joke of the event (Ahmed, 2006) • Behavioural avoidance, cognitive avoidance (Stern, 1999) • Forgetting or distraction (Berti et al., 2000) • Avoidance, not problem resolution (Cole et al., 2009) • Avoidance, denial, distraction or engaging in another activity, disregard shaming other entirely (Jarc, 2004) 	Avoidance	Prevention
<ul style="list-style-type: none"> • Shame displacement: Externalizing blame, unresolved shame feelings, felt anger, retaliatory anger, and displaced anger, anger at others, other externalising reactions, denial of responsibility, condemnation of the condemners (Ahmed, 2006, 2008; Ahmed & Braithwaite, 2004, 2006; Morrison, 2006, Ttofi & Farrington, 2008) • Externalising (responding with anger or aggression) (Thomaes et al., 2007) • Aggression (Stern, 1999) • Distance and displace (McCaslin et al., 2016) • Aggression towards shaming other (Jarc, 2004) 	Attack other	Other-directed aggression

^a Nathanson, 1994; Elison, Lennon, & Pulos, 2006

strategies). The one study which examined the effect of age on shame regulation process (Berti et al., 2000) found no significant age effect between 5-, 7-, and 9-year-old children.

Prior research suggests age effects in regulation strategies may exist, for example, Szentágotai-Tătar and Miu (2016) found evidence that use of a *rumination* strategy to regulate emotions increases with age in adolescents (13-17 year olds). However, they found no significant age effect for other regulation strategies (*self-blaming, acceptance, positive refocusing, refocus on planning, positive reappraisal, putting into perspective, catastrophizing, blaming others*). Whether shame regulation strategies vary with age is not yet understood. Because of the parallels found between review results and Nathanson's compass of shame strategies as well as those

described by De Hooge et al. (2010, 2011, 2018), it may be suggested that strategies used by both adults and children are fairly similar. However, this is not to say that an individual's shame regulation script will remain static throughout life.

Strategies identified in the included studies were inextricably tied to the research methodology and shame regulation measurement tools. Many tools were not validated (i.e., measurement of their psychometric properties was not conducted). This compromises the methodological quality of publications. However, this is likely to be a reflection of the infancy of the shame regulation field. Methods used to explore shame regulation ranged from a narrow focus on one particular shame response (e.g., externalising; Thomaes et al., 2007), through those where the strategies were those examined by the measurement tool adopted (e.g., all studies adopting the MOSS-SASD), to methods which openly asked children to identify how they felt they would respond to shame. It is the last approach which is likely to offer the widest range of strategies, and also may have the greatest construct validity, given children's responses regarding strategies were not restricted to those within the bounds of any pre-existing theoretical base. However, both studies adopting this approach (Berti et al., 2000; Jarc, 2004) used hypothetical scenarios, and the ecological validity of strategies remains unknown.

Review results demonstrate there exists another distinct group of shame regulation strategies that were not reflected in either the compass of shame (Elison, Lennon, & Pulos, 2006; Nathanson, 1994) nor by Schoenleber and Berenbaum (2012). These include strategies such as *expressing remorse* (Ahmed, 2008), *restoring the interpersonal bridge* (Jarc, 2004), *asking for help*, *seeking comfort*, and *facing the situation* (Berti et al., 2000).

This group of regulation strategies can be understood as approach-type responses, describing positive behaviours which function to restore the threatened, shamed self (De Hooge,

Zeelenberg, & Breugelmans, 2010, 2011; De Hooge, Breugelmans, Wagemans, & Zeelenberg, 2018), and involving both the acknowledgement of shame and proactive movement *towards* the affect, self, or shaming other in order to down-regulate the shame experience. In several mixed-methodology studies with emerging adults, De Hooge and colleagues found strong support that when faced with shame, individuals first attempt social approach behaviours, which is in contrast with the decades of theoretical and empirical focus on the withdrawal-type behaviours associated with shame. Researchers report that approach behaviours will only not occur when they are not possible (e.g., the desire to restore a relationship exists but the shaming other is unavailable), or too risky, where approach runs the risk of exposing the threatened self to further shame following approach. For example, expressing remorse involves putting the threatened self at risk of further rejection, thus increasing shame. It is likely *approach-type* shame regulation scripts are indeed viable regulation strategies for those who do not experience chronic shame (i.e., shame-proneness, shame-as-self), but will not be employed if *approach* is not part of one's overall affect regulation strategy (e.g., for the neglected child for whom *approach* may not be part of their affective script due to lack of success when attempted in the past).

Similarly, the most recent iteration of the Compass of Shame Scale (COSS-5) included a novel group of shame regulation strategies used by adolescents, named an *adaptive style* of shame coping (Schalkwijk, et al., 2016; Vagos, Ribeiro da Silva, Brazão, Rijo, & Elison, 2019). This adaptive style involves “self-soothing (i.e., being self-reassuring and accepting shameful feelings as part of the human condition) and/or [the] restoration of relationships (i.e., trying to solve misunderstandings with others, considering their points of view, and/or making amends),” (Vagos et al., 2019, p. 94), whereby “the individual assesses acknowledgement of shame and his/her motivation is to apologize and/or make amends,” (Schalkwijk et al., 2016, p. 1778).

These previous theoretical perspectives combined with review results provide support for the addition of a new family of shame regulation responses best described as *approach-type responses*. Within this, two distinct strategies can be identified – *soothe self* (e.g., *taking care of the physical body*; Jarc, 2004, *asking for help, seeking comfort*; Berti et al., 2000) and *restore relationship(s)* (e.g., *make amends*; Ahmed, 2006, 2008; Ahmed & Braithwaite, 2004, 2006; Ttofi & Farrington, 2008; *express remorse*; Ahmed, 2008; *positive confrontation with the shaming other*; Jarc, 2004).

The *soothe self* strategy is similar to Izard's (1977) third shame defence strategy, *affirmation of the self*, which is not reflected in any of the poles of the compass of shame but involves affirming the aspect of the self which has been the subject of shame and/or an unrelated element of the self. This strategy could perhaps be considered the opposite to *attack self*, whereby *affirmation of the self* is a response involving proactive, soothing restoration of the self-image functioning to counteract shame's acute threat to the self.

Support was found for these existence of these approach-type responses across a wide age range (five years through to secondary school; no study with participants in late adolescence included approach-type strategies in measurement methodology). A gender difference was evident in two of three studies which both explored the approach shame regulation strategies and reported on gender differences. Jarc (2004) and Stern (1999) found girls were more likely than boys to employ approach-type strategies to regulate their shame. These findings are consistent with results found by Vagos et al. (2018) that adolescent girls more frequently coped with shame adaptively (i.e., self soothing and/or restoring relationships) than boys. Thomaes et al. (2007) found boys were significantly more likely to use externalising strategies (i.e., *attack other*,

avoidance) than girls, which is in contrast with findings in Vagos et al. (2018) who found no gender difference in the use of externalising strategies.

Berti et al. (2000) found no significant gender differences in approach-type regulation strategies. This study included participants two to five years younger than the youngest of participants in Jarc (2004) and Stern (1999), suggesting the possibility of an age/gender interaction effect where gender differences may emerge later in childhood. However, this is a tentative suggestion only and requires further exploration.

The emergence of mixed support for approach-type strategies was closely tied to publication methodology. Support was found for approach strategies in the two studies where children were asked to freely generate shame responses without being bound to answering against existing frameworks (i.e., Jarc, 2004; Berti et al., 2000). Additionally, these strategies were present in all six studies using the MOSS-SASD (Ahmed, 2006, 2008; Ahmed & Braithwaite, 2004, 2006; Morrison, 2006; Ttofi & Farrington, 2008) in which the factor of *shame acknowledgement* contains approach-type adaptive responses (i.e., *facing up to others' rejection, making amends*). However, the *shame acknowledgement* factor also contains elements which overlap with more than one discrete shame regulation strategy. For example, the factor also includes responses indicative of the attack self strategy (i.e., *anger at self*), and withdrawal (i.e., *feeling like hiding oneself*). Further, *feeling shame* and *admitting shame and wrongdoing* are processes shared by withdrawal, attack self and the approach response, all of which necessitate an acceptance of shame's uncomfortable message (Nathanson, 1994). Thus it is unlikely that the MOSS-SASD shame acknowledgement factor directly measures approach-type responses alone.

Stern (1999) found no evidence of a link between shame-proneness and problem solving or assistance seeking. However, given the study's focus on shame proneness rather than state

shame, this is unsurprising – withdrawal and other defensive shame responses are likely to be more successful than attempting to restore a chronically threatened self (De Hooge, Zeelenberg, & Breugelmans, 2010).

Cole et al. (2009) suggest shame is not associated with problem resolution. However, this non-empirical publication looked specifically at serious misconduct, and for these children who have commonly grown up in disruptive environments and are unlikely to be securely attached, it is likely that approach strategies are too risky.

Ross (2017) found achievement shame negatively predicted spontaneous help and reparative behaviour, however, there was no association between these processes and moral shame. Although these strategies are approach-type responses in that they necessitate moving toward another, the highly specific behaviours coded as indicative of the strategies (i.e., retrieves crayon dropped by experimenter, attempts to fix a broken toy) may not capture other reparative or approach-type attempts, for example, self-soothing. Interestingly, results taken overall *did* demonstrate evidence of social approach behaviours in response to an achievement and mishap paradigm, where results demonstrated 66.3% of children made amends and 57.5% demonstrated spontaneous help in the experimental paradigm. However, the author considered these behaviours indicative of guilt rather than shame, consistent with previous research which has demonstrated reparative behaviour to be typical of, or correlated with, guilt (e.g., Schalkwijk et al., 2016; Silfver, 2007; Tangney & Dearing, 2002).

Although theoretically and behaviourally very similar to the approach-type responses described by De Hooge et al., (2010, 2011, 2018), the labelling of such strategies as *adaptive* in the COSS-5 may be misleading. What is *adaptive* is context-dependent. Approaching another to restore a relationship involves exposing the threatened self to potential further shaming. A child

raised in a volatile home environment for whom approach strategies have never been successful in previous displays of affect may learn that to attack another is the most successful way to down-regulate their shame without future shame exposure, and hence this strategy may be more *adaptive* than approach strategies to regulate shame (although this may be considered less adaptive for overall functioning).

The existence of these approach-motivating shame regulation styles challenges the notion that shame is inherently maladaptive. Approach-type responses to shame may be the mechanism by which shame plays an adaptive role in societal confirmation, motivation, and interpersonal functioning.

A Theoretical Framework for the Aetiology of Shame Regulation Scripts

A central purpose of affect regulation theory is “to construct more complex theoretical models that can generate both heuristic experimental research and clinically relevant formulations of human social-emotional development,” (Schoe, 2020, p. 388). The disparate findings emerging in all outcomes of this review are acutely reflective of the youth of the shame regulation field. Results indicate a pressing need for integration of empirical research and theory in order to establish consistent understanding, allow accurate comparison across publications, and facilitate the generation of testable hypotheses pertinent to shame regulation and the field’s range of clinical implications.

The theoretical framework shown in Figure 4 is generated from the results of this review, existing theories, and relevant research (most of which has been conducted in adults), and depicts the developmental aetiology of shame regulation scripts. Understanding how individuals generate shame regulation scripts is of central importance in understanding how maladaptive patterns can be altered, thus potentially avoiding the negative consequences associated with

dysregulated shame. The following framework is a template for script generation; every individual's pattern will be different depending on many factors including age, gender or gender role, cultural context, developmental factors – particularly attachment – and sociocultural influences such as peers. Additionally, the model is reflective of an emerging field where much further research is required, and as such, should be considered a first version of an iterative framework development process, which is amenable to change as the field progresses.

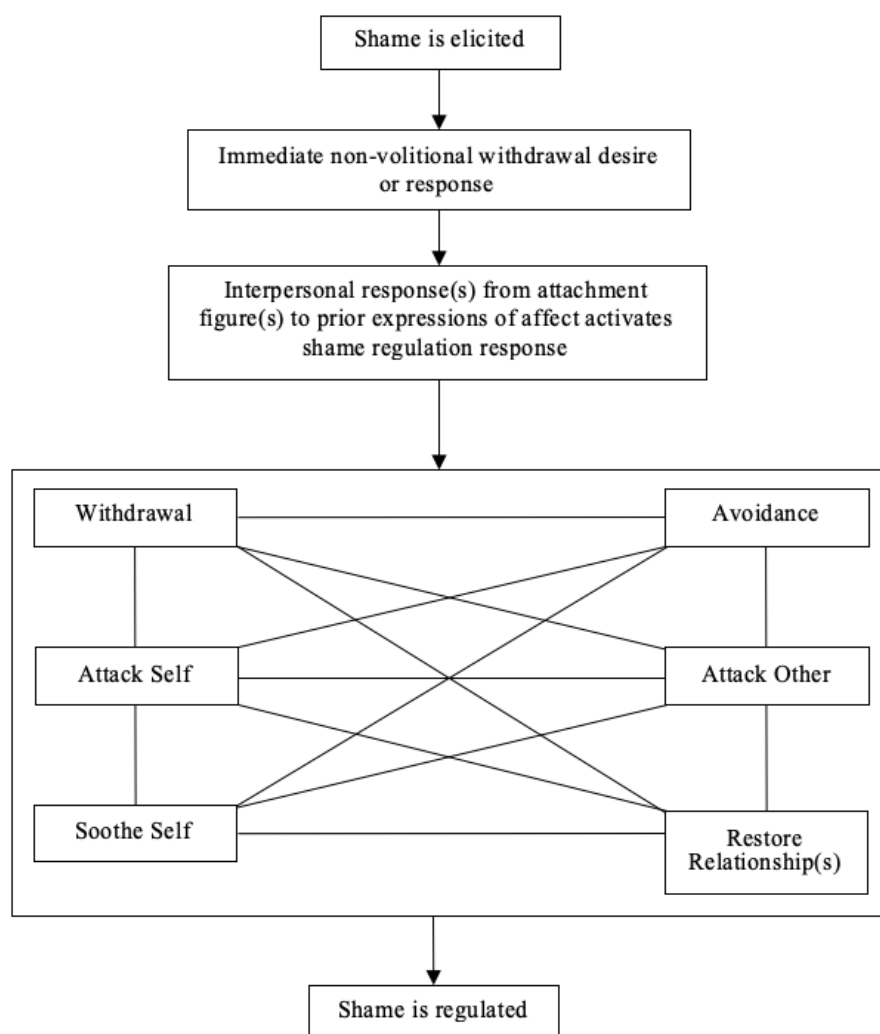


Figure 4. Theoretical framework of the aetiology of shame regulation scripts

An individual will move along the framework as follows. After the elicitation of the shame affect (box 1), the universal first response is a non-volitional withdrawal behavioural

expression of shame, such as a slumping of the head and shoulders, gaze aversion, or blushing, or a desire to exhibit such a withdrawal response (box 2). This is a biological marker characteristic of an internal representation of the infant's shame affect. This withdrawal response may extend over several moments, or be fleeting, for example, a brief drop of the eyes to the floor following registering a caregiver's face displaying disgust upon picking up an infant who is in need of a nappy change. The non-volitional withdrawal response has been demonstrated to exist in infants as young as three months (Moe et al., 2016). It is important to note that this withdrawal response is separate to the withdrawal response used by some further down the hierarchy, in that it is *universal* and occurs *immediately following* the elicitation of shame.

What happens next depends on the infant's implicit recollection of previous expressions of affect. This includes what happened following previous affective expression (Nathanson, 1994), namely how attachment figures responded. If caregivers have previously responded positively to an infant's expression of precursory attachment behaviours (i.e., by relieving or soothing the cause of affective stimulation) shame regulation responses are likely to be similar, for example, attempting these precursory attachment behaviours typical of interpersonal approach. However, for a neglected child whose previous approach-type precursory attachment behaviours were not met with affective soothing, no approach attempts will be made and instead the child will adopt defensive strategies to regulate shame.

Further, rejection or being ignored by caregivers results in a child developing a structure of the self that is shame-based, providing a template where subsequent interpersonal relationships will be associated with shame (Kaufman, 1996), and thus shame regulation scripts can be understood "as developing in parallel with the development of the self" (Nyström & Mikkelsen, p. 522).

Attachment is fundamental to this step. Bowlby (1982) proposed that attachment systems are activated in response to threat, (internal threat as a result of physical discomfort, threats to safety or wellbeing, and threats to attachment figure availability). Central to shame is the implication of a threat to the self (De Hooze et al., 2010, 2011, 2018), and where the child experiences threat, proximity to the attachment figure will likely be sought, if possible. This is also reflective of a child's internal working model of the self and others, which guides the development of strategies for coping with stress and threats to self (Kennedy & Kennedy, 2004).

Thus the infant's general affective regulation system, generated from interpersonal responses to previous affective expression, exerts significant influence on their adoption of shame regulation strategies. This will happen in quick succession to the automatic withdrawal response.

Experiencing shame is extremely unpleasant, and hence the child will attempt to relieve themselves of this pain through shame regulation. The possible strategies employed are *attack self*, *withdrawal*, *attack other*, *avoidance*, *soothe self*, and *restore relationship(s)*. These strategies are conceptual descriptors of processes, what Nathanson referred to as script libraries, within which are a large number of more specific processes (e.g., within *attack other* may be *swearing at a shaming sibling*). One or more shame regulation strategy may be selected in response to one event of shame elicitation, and which strategy is selected is highly context-dependent; this is represented by the lines between strategies. This framework may act as a template for understanding individual shame regulation tendencies, which may be represented by lines between preferred strategies being displayed as thicker than lines to rarely- or never-used strategies.

The final box demonstrates that this framework concludes in shame being regulated; the purpose of any regulation strategy is to make shame feel different (Nathanson, 1994). Successful progression down this framework will result in shame being down-regulated. However, under certain circumstances, regulation will result in increased shame. For example, if a child attempts to approach the shaming other to make amends, but this results in further shame, the shame affect will have been *increased*, or intensified. In this case, other shame regulation strategies are likely to be adopted in order to relieve the self from the pain associated with shame.

Every shame-eliciting experience draws an individual back to recall previous instances of shame (Nathanson, 1994). Upon future elicitation of shame, the individual moves down the steps in the framework. The phase of recall of previous expressions of affect now includes previous expressions of shame, including what happened following a regulatory attempt. If the attempt was successful in down-regulating shame, the individual may again adopt this strategy, thus reinforcing this developing preference for that particular shame regulation script. This is the beginning of the *shame* regulation script's development, rather than shame being regulated as per an individual's more general *affect* regulation script, although the two will be mutually-influencing.

An individual's progression along this framework will vary depending on numerous factors. Age will certainly influence which strategies are selected. An infant may be capable of *withdrawal* (e.g., gaze aversion, slumping of the head and shoulders) at 3 months old (Moe et al., 2016), but *attack self* necessitates an established self-concept, which does not normatively emerge until around 30 months (Bullock & Lütkenhaus, 1990). Inconclusive review results and previous research suggest it is possible progression will also vary as a function of gender or gender role (e.g., Benetti-McQuoid & Bursik, 2005). Further, general affective adaptation will

exert influence (represented by the third box in Figure 4), which is supported by prior research finding the trait of emotional intelligence promoted the use of adaptive strategies (i.e., problem-focussed coping) in shame with young adults (Mikolajczak, Nelis, Hansenne, & Quoidbach, 2008). Attachment style, and whether or not an individual yet has a distinct attachment style, will play a central role in an individual's particular shame regulation script.

Implications

This review carries implications for practice and theory regarding the substantial role of shame and its regulation in children and adolescents. Shame and successful dealing with affective shame experiences play a fundamental role in the development of the self-concept (Izard, 1997). Thus it is suggested that in a therapeutic setting, emphasis should not necessarily be placed solely on the existence of shame itself, but rather *what the young person does* when faced with shame, i.e., an individual's shame regulation script.

It is important that clinicians are aware of shame and of behaviours associated with its regulation that may indicate maladaptive shame regulation patterns. Shame itself should not necessarily be considered inherently negative and pathological, but attention instead paid to its regulation, indicative of the role shame may play in an individual's life, particularly regarding interpersonal functioning (Morrison, 2006; Scheff, 2000). Shame must be considered inextricably linked to attachment and interpersonal reactions to the early expression of affect, due to their parallel and reciprocal development. This close relationship is especially relevant in a therapeutic setting, for example, regulated re-enactments of attachment trauma in an adult group therapy setting can successfully regulate state shame (Schore, 2020).

It is also suggested shame and shame regulation patterning be included as part of routine assessments for children and adolescents. This may be particularly important for those children

and adolescents displaying symptoms indicative of personality pathology (Schoenleber & Berenbaum, 2012), and those displaying disruptive and antisocial behaviour, who may have struggled with shame-eliciting and adverse life experiences from a young age (Vagos, Ribeiro da Silva, Brazão, Rijo, & Elison, 2019).

Shame regulation is likely to play a role in dissociation, including in Dissociative Identity Disorder (DID), especially when combined with shame-eliciting experiences such as trauma and abuse (Dorahy, 2017). Previous empirical research has demonstrated that adults with DID showed significantly higher levels of *attack self*, *withdrawal*, and *avoidance* shame regulation strategies compared to complex trauma, general mental health, and healthy volunteer groups (Dyer et al., 2017). *Approach-type* strategies may also be implicated in dissociation, where adults indicated a preference for the company of a close friend after describing experiences of dissociation and sadness, rather than the company of an acquaintance or being alone.

Robust, validated measurement tools are required to assess shame regulation scripts. At present, the most recent iteration of the Compass of Shame Scale (COSS-5; Schalkwijk, Stams, Dekker, Peen, & Elison, 2016; Vagos, Ribeiro da Silva, Brazão, Rijo, & Elison, 2019, original scale by Elison, Lennon, & Pulos, 2006) is the most theoretically and clinically up-to-date measure, due to its inclusion of the *adaptive* strategy (additional to *attack self*, *withdrawal*, *avoidance*, and *attack other*) and its successful validation in an adolescent sample. Validation in a younger sample is required before use with younger children. The theoretical framework offered in this thesis may also be a useful therapeutic tool for mapping out an individual's pathway along the aetiology of their particular shame regulation script and identifying their shame regulation tendencies.

Previous research with children indicates shame regulation scripts are amenable to change through training social and emotional skills (Morrison, 2006). This is particularly pertinent in therapeutic attempts to shift maladaptive regulation tendencies, which is vital if the myriad negative consequences of maladaptive shame regulation are to be minimised. Further, recent research suggests incorporating shame regulation principles into therapy may have positive outcomes. Schoenleber and Gratz (2018) found a shame regulation group therapy programme demonstrated significant improvements in shame, self-acceptance, and borderline personality disorder symptoms among adults with elevated shame.

Some regulation strategies identified in this review sit at a higher conceptual level than the strategies outlined in the above framework, or have elements shared by more than one strategy. The *inadequate and exposed* shame regulation factor described by McCaslin et al., (2016) involves components of both *withdrawal* (i.e., *wishing one could disappear*) and of *attack self* (i.e., *anger at self*). Further, some strategies are ambiguous, whereby more context is required to ascertain how they function. For example, the regulation processes *taking space away from the situation* could be considered either a withdrawal response or self-soothing regulatory attempt, and *reaction formation* could either be a valid adaptive self-soothing regulation process or an avoidance strategy (Jarc, 2004).

This review complements the work of many great theorists (e.g., Nathanson, Tomkins, Schore, De Hooge) in signalling the importance of a shift away from a narrow view of shame as maladaptive and unpleasant, to an exploration of the mechanisms behind shame's many associated negative outcomes. Shame is not necessarily maladaptive; approach, repair, and amend-making can be driven by shame experiences (Wong & Tsai, 2007; De Hooge et al., 2010, 2011, 2018), which are likely crucial to repairing the interpersonal bridge ruptured by shame

(Kaufman, 1974). Individual shame regulation scripts, and their link to attachment, are the vital avenues for furthering our understanding of how negative outcomes associated with maladaptive shame regulation can be avoided. The heuristic value of this review is the presentation of a theoretical framework to act as a template for both mapping individual shame regulation scripts and for future theoretical explorations.

Directions for Future Research

A multitude of avenues exist for future research regarding the mechanisms, effects of, and clinical importance of shame regulation, which have been brought into greater relief by the findings of this review. The key purpose of the presented framework of the developmental aetiology of shame regulation scripts is to act as a template for the generation of future testable hypotheses pertinent to shame, its regulation, and associated consequences of poor shame regulation. Although by no means exhaustive, the following can be considered top-priority steps for future research endeavours.

A fundamental principle of this thesis is that shame itself is not inherently maladaptive per se, but it is associated with a number of negative outcomes when it is poorly regulated. This perspective has recently received wide-reaching support by a number of theorists (e.g., Czub, 2013; Gupta, Rosenthal, Mancini, Chaevens, & Lynch, 2008; Elison, Lennon, & Pulos, 2006; Miceli & Castelfranchi, 2018; Schoenleber & Berenbaum, 2012; Schore, 2019; Thomaes, Stegge, & Olthof, 2007), however, there does not yet exist a body of empirical evidence offering support of this claim. Further mixed-methodology research (Gross, 2014) is urgently needed in order to empirically test this premise.

Closely tied to the above is the importance of understanding what exactly constitutes maladaptive shame regulation. For example, is *attack self* always an indicator of poor shame

regulation, or is it only when this strategy is repeatedly used does one conclude the individual has maladaptive shame regulation tendencies? What is adaptive for one individual may not be for another. For a child in a volatile, violent home environment where approach-type behaviours are always too risky, *attack other* may be considered the most adaptive shame strategy if it is successful at down-regulating shame and if it prevents the child from being further shamed. Thus sensitivity to individual variables, such as dynamics within home environments, will be vital in empirically differentiating adaptive and maladaptive shame regulation.

On pages 59-60, the author described several variables which may exert influence on the development of an individual's particular shame regulation script. These should be empirically tested in order to understand their respective effects on shame regulation script development; each association will aid in the pursuit of understanding how individuals may be supported to develop adaptive shame regulation scripts. Also sorely needed is empirical testing of the effects of various shame regulation strategies.

Empirical work in this area is likely to further refine the framework proposed in this thesis. A present challenge in the shame regulation area is that a body of research has not been built on which to conduct a systematic review and meta-analysis. One outcome of this thesis is the call for the generation of more high-quality robust studies in the shame regulation field, particularly those relevant to the pressing avenues outlined above, in order to increase the field's empirical base and refine and empirically test the fit of this theoretical framework.

Strengths and Limitations

The fundamental strength of this review is the diversity of included publications. This was achieved through the comprehensive and exploratory search strategy and the inclusion of both theoretical and empirical literature, with no publication date or type restrictions.

Some methodological limitations must be noted regarding the inclusion criteria and candidate publication screening process. It is considered best-practice for two (or more) reviewers to extract data and to screen candidate citations against inclusion criteria in the publication selection process to minimise error (Devillé et al., 2002; Jahan, Naveed, Zeshan & Tahir, 2016; Meline, 2006; Shamseer et al., 2015). Two independent reviewers screened all candidate publications generated from searches conducted within the PsycINFO database (54.7% of all non-duplicate candidate citations excluding those from the reference-checking phase), however, a sole reviewer (the thesis author) was responsible for screening all non-duplicate citations from Medline and Education Source against inclusion criteria. The same two reviewers extracted data from only five (28%) randomly-selected publications, and the thesis author held sole responsibility for the remaining 13. Additionally, reference-checking and screening of any further non-duplicate citations retrieved from the reference lists of included publications was completed by the thesis author alone. However, the strong (McHugh, 2012) inter-rater reliabilities in both instances where two reviewers were available suggest this approach was unlikely to compromise the integrity of the screening and data extraction processes. At all three of the aforementioned stages, a third reviewer – the thesis student’s primary supervisor – was available for consultation in any cases of uncertainty to minimise error in each stage.

Inclusion criteria specified publications to be included were those where the sample or population of interest were exclusively children, adopting the United Nations (1990) definition as all those *under* 18 years of age. Thus empirical studies whose samples included any participants of 18 years or over, even if the majority of participants were under 18, were excluded (i.e., Meier, 2003; Schalkwijk et al., 2016; Vagos, et al., 2019). However, had these been included it would not have been possible to ascertain with confidence whether review

results would have held for a population exclusively under the age of 18. Although not included in the review itself, the narrative, scoping review methodology allowed integration of findings from publications which did not meet inclusion criteria, to the extent they were pertinent to review findings. It is suggested a future review of literature regarding shame regulation in adults will deepen the understanding of the development of shame regulation scripts throughout life.

The review was restricted to those publications published in, or translated into, English due to practical constraints – the thesis author speaks only English. This is likely to bias findings to the individualistic Western conceptualisation of shame. Because the understanding of shame varies in different cultures, including the value placed on shame, its interaction with the self-concept, and its distinction from guilt (Furukawa, Tangney & Higashibara, 2012; Ohsako, Doi, & Bester, 1974; Shweder, 2003; Wong & Tsai, 2007), results should not be assumed to generalise to other cultural contexts.

Upon data extraction, where information was not reported by publication authors (e.g., ethnicity), no attempt was made to contact the author(s) to seek this information. However, in instances where it was possible to calculate information which facilitated comparison across publications (e.g., gender proportions) from provided information, this was completed by the thesis author.

Although not necessarily a methodological limitation, it is worth noting that pre-registration of this review's protocol – known to increase scientific transparency, reduce selective outcome reporting, and minimise risk of research duplication (Andrade, Pereira, Weir, Ardern, & Espregueira-Mendes, 2019; Moher, Booth, & Stewart, 2014; Sideri, Papageorgiou, & Eliades, 2018) – was attempted but not successful. The protocol was submitted to the International Prospective Register of Systematic Reviews (PROSPERO), database, however, due to

“extremely high demand for registration,” the attempted registration could not be completed prior to embarking on the review.

Conclusion

The destructive and disrupting influence of shame is not intrinsic to the affect per se, but is instead a consequence of maladaptive shame regulation and environmental influences. Thus, understanding the strategies used by children and adolescents to regulate their shame is of particular importance in the pursuit of interrupting maladaptive shame regulation patterning. No publication review assessed the impact of shame regulation strategies on experiences of shame – it is vital this is examined in future research endeavours. A developmental approach is of central importance due to the centrality of attachment and the development of the self to the generation of shame regulation patterns, and indeed vice versa.

To the author’s best knowledge, this is the first review in the emerging field of shame regulation. The proposed theoretical framework of the aetiology of shame regulation scripts holds substantial heuristic value, challenging existing notions that individuals only regulate their shame using defensive strategies, and acting as a template for the development of future testable hypotheses. It is also possible the framework holds value as a clinical tool in its own right.

The challenge for the affect regulation field now is to determine which specific strategies individuals use to regulate the various affects. Within each affect regulation script there will be individual variability depending on developmental factors, particularly attachment, and social and cultural influences such as peers. By weaving review results with existing theory to present the shame regulation strategies children and adolescents use to regulate their shame, this thesis has set this in motion.

“We are at once governed by – and governors of – our emotions.” (Gross, 2015, p. xi)

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Appendix A: Search Strategy Development Summary

The search syntax development was an iterative process, with each step designed to increase the sensitivity, specificity, and precision of the database searches. This Appendix offers an overview of the process.

Firstly, a list of search terms was generated by gathering synonyms for ‘increase’, ‘decrease’, and ‘adjust’ in the Oxford English thesaurus (accessible online: www.lexico.com). Non-academic synonyms (e.g., ‘upswing’) were not selected. This resulted in a list of 24 candidate terms, displayed in Table I.

Table I.

Candidate search terms and associated regulation concept

Concept	List of related terms
Increase	Amplify, elevate, enhance, escalate, heighten, increase, inflate, intensify, prolong, strengthen
Decrease	Attenuate, decline, decrease, diminish, lessen, lower, reduce, shorten
Otherwise adjust	Adjust, change, control, moderate, modify, modulate

‘Regulate’ and ‘dysregulate’ were added to the list of terms.

Next, each search term was searched individually in the PsycINFO database following the syntax in Table II. The search was restricted to English-language results only and publications where the sample or population of interest was children. There were no date or publication type restrictions. The numbers of search results for each individual term are displayed in Table III.

Table II.

Pilot syntax for search term development.

Database	Syntax
PsycINFO	1. TI ((increas*) N5 shame*) OR AB ((increas*) N5 shame*) 2. Limit 1 to: Lanugage: English; SubjectAge: childhood (birth-12 yrs) AND adolescence (13-17 years)

Table III.

Number of results for each search term

Search term	n results
Increase	73
Heighten	7
Intensify	2
Strengthen	1
Elevate	6
Amplify	3
Enhance	9
Prolong	1
Inflate	2
Escalate	0
Decrease	28
Reduce	46
Decline	1
Diminish	8
Lower	49
Shorten	0
Lessen	2
Attenuate	3
Regulate	30
Dysregulate	5
Moderate	16
Modulate	1
Control	67
Change	43
Modify	4

‘Shorten’ and ‘escalate’ retrieved no search results, so these terms were removed from the candidate search term list. As the search progressed, various other terms emerged from extant literature that were used to describe shame regulation processes. As a result, ‘cope’ and ‘manage’

were entered into the search term list. Truncations (*) were added where grammatically appropriate to capture various word suffixes.

The final search list contained 25 terms, which were combined with ‘shame’ (and its linguistic counterparts) via an ‘AND’ command, as shown in Table IV. Searched on 13/08/2019, this gave at 780 results.

Table IV.

Test search syntax

Database	Syntax
PsycINFO	<ol style="list-style-type: none"> 1. Shame OR shamed OR shaming 2. increas* or heighten* or intensif* or strengthen* or elevat* or amplif* or enhanc* or prolong* or inflat* or decreas* or reduc* or declin* or diminish* or lower* or lessen* or attenuate* or regulat* or dysregulat* or moderat* or manag* or modulat* or control* or modif* or changing or changed or coping or coped 3. 1 AND 2 4. Limit 3 to: Language: English; SubjectAge: childhood (birth-12 yrs) AND adolescence (13-17 years)

This search was further refined to include a proximity command to capture publications where the terms were found within 5 words of ‘shame’, and to optimise in-built database tools such as using subject headings. Database tools were customised for each database. The final syntax, developed in consultation with the thesis author’s primary supervisor and a University librarian, are detailed in Appendix B.

Appendix B: Search Syntax

Database	Syntax
PsycINFO	<ol style="list-style-type: none"> 3. DE "Shame" OR DE "Embarrassment" OR DE "Guilt" 4. shame* 5. S1 OR S2 6. TI (((increas* or heighten* or intensif* or strengthen* or elevat* or amplif* or enhanc* or prolong* or inflat* or decreas* or reduc* or declin* or diminish* or lower* or lessen* or attenuate* or regulat* or dysregulat* or moderat* or manag* or modulat* or control* or modif* or changing or changed or coping or coped) N5 shame*)) OR AB (((increas* or heighten* or intensif* or strengthen* or elevat* or amplif* or enhanc* or prolong* or inflat* or decreas* or reduc* or declin* or diminish* or lower* or lessen* or attenuate* or regulat* or dysregulat* or moderat* or manag* or modulat* or control* or modif* or changing or changed or coping or coped) N5 shame*)) 7. DE "Emotional Adjustment" OR DE "Coping Behavior" 8. S4 OR S5 9. S3 AND S6 10. Limit 7 to: Language: English; SubjectAge: childhood (birth-12 yrs) AND adolescence (13-17 years)
Medline (Ovid)	<ol style="list-style-type: none"> 1. shame/ or embarrassment/ 2. shame*.ti,ab,kf. 3. 1 or 2 4. adaptation, psychological/ or emotional adjustment/ 5. ((increas* or heighten* or intensif* or strengthen* or elevat* or amplif* or enhanc* or prolong* or inflat* or decreas* or reduc* or declin* or diminish* or lower* or lessen* or attenuate* or regulat* or dysregulat* or moderat* or manag* or modulat* or control* or modif* or changing or changed or coping or coped) adj5 shame*).ti,ab,kf. 6. 4 or 5 7. 3 and 6 8. Limit 7 to "all child (0 to 18 years)"
Education Source	<ol style="list-style-type: none"> 1. AB (((increas* or heighten* or intensif* or strengthen* or elevat* or amplif* or enhanc* or prolong* or inflat* or decreas* or reduc* or declin* or diminish* or lower* or lessen* or attenuate* or regulat* or dysregulat* or moderat* or manag* or modulat* or control* or modif* or changing or changed or coping or coped) N5 shame*)) OR TI (((increas* or heighten* or intensif* or strengthen* or elevat* or amplif* or enhanc* or prolong* or inflat* or decreas* or reduc* or declin* or diminish* or lower* or lessen* or attenuate* or regulat* or dysregulat* or moderat* or manag* or modulat* or control* or modif* or changing or changed or coping or coped) N5 shame*)) 2. child or children or young person or adolescent or teenager or youth or young people 3. S1 AND S2 4. Limit 3 to: Language: English

Appendix C: Data Extraction Form

Data Extraction Form

Systematic review title: *Shame regulation in children: A systematic search and narrative review*

Review registration no: protocol submitted for registration 04/09/2019, publication remains pending

Notes on using this data extraction form²:

- Be consistent in the order and style you use to describe the information for each report.
- Record any missing information as unclear or not described, to make it clear that the information was not found in the study report(s), not that you forgot to extract it.
- Include any instructions and decision rules on the data collection form, or in an accompanying document. It is important to practice using the form and give training to any other authors using the form

1. General information

1) Date form completed	
2) Name of reviewer extracting data	
3) Citation reference	
4) Publication type (e.g. thesis, peer-reviewed journal article, book chapter)	
5) Country in which the study was conducted (if not an empirical study, country of author affiliation)	
6) Publication funding source	
7) Possible conflicts of interest (for authors e.g. not reported)	

2. Eligibility

Characteristics		Eligibility met?			Location in text (page #/fig/table)
		Yes	No	Unclear	
Type of citations ³	All eligible (books, theses, journal articles, empirical studies)	✓			
Participants	Exclusively children (0-18 years inclusive)				
Focused condition	Shame				
Outcome	Identifies shame regulatory process OR Describes a process by which children respond to shame				

² Taken from the Cochrane Collection (2014)

³ All will be ticked as 'yes' due to all citation types being eligible

SHAME REGULATION STRATEGIES USED BY CHILDREN AND ADOLESCENTS

Decision (highlight)	INCLUDE	EXCLUDE
Reason for exclusion		
Notes:		

DO NOT PROCEED IF STUDY IS EXCLUDED FROM REVIEW

3. Methods

	Description as stated in publication	Location in text (page #/fig/table)
8) Empirical study? (yes/no)		
9) <i>If yes at 8):</i> Aim of study		
10) <i>If yes at 8):</i> Design (e.g. cross-sectional study)		
Notes:		

4. Participants

Provide overall data and, if available, comparative data for each intervention or comparison group

	Description as stated in publication	Location in text (page #/fig/table)
11) Total number of participants		
12) Gender ratio		
13) Age/school grade		
14) Ethnicity		
15) Method(s) of participant recruitment/sampling technique		
Notes:		

SHAME REGULATION STRATEGIES USED BY CHILDREN AND ADOLESCENTS

5. Outcomes

Brief description only; detail to be reported in results section

Outcome 1: Shame	Description as stated in publication	Location in text (page #/fig/table)
16) Focus of shame (e.g. body shame, shame-proneness)		
17) Shame assessment method/tool		
18) Is measure validated? (yes/no/unclear)		
Notes:		

Outcome 2: Shame regulation	Description as stated in publication	Location in text (page #/fig/table)
19) Name(s) of regulation process(es) OR Process(es) by which children respond to shame <i>Circle above</i>		
20) Was the impact of the regulatory process(es) on shame empirically tested?		
21) <i>If yes at 19):</i> Regulatory process(es) assessment method/tool		
22) <i>If yes at 19):</i> Is measure validated? (yes/no/unclear)		
23) <i>If yes at 19):</i> Effect size		
24) Terminology used to describe shame regulatory process(es) (e.g. shame management, shame coping)		
Notes:		

SHAME REGULATION STRATEGIES USED BY CHILDREN AND ADOLESCENTS

Outcome 3: Gender difference	Description as stated in publication	Location in text (page #/fig/table)
25) Gender difference in shame		
26) Gender difference in regulatory process(es)		
Notes:		

6. Limitation and mitigation strategy

	Description as stated in publication	Location in text (page #/fig/table)
27) Strength		
28) Limitation		
29) Strategies to overcome the limitation		
Notes:		

7. Conclusion

	Description as stated in publication	Location in text (page #/fig/table)
30) Key conclusion(s) of article authors		
Notes:		

PROCEED ONLY IF PUBLICAITON IS AN EMPIRICAL STUDY

8. Quality assessment⁴

	Often not stated; data extractor(s) requested to find information and state yes/no, with notes if yes	Location in text (page #/fig/table)
31) Population of interest		
32) Was the sample representative? If no, what was the sampling technique?		
33) Was the shame measurement tool appropriate and validated?		
34) Was the shame regulation measurement tool appropriate and validated?		
35) Was blinding used in the research design?		
Notes:		

⁴ Developed in consultation with thesis author's supervisor, and partly informed by Kim et al., 2013

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Appendix D: Main Characteristics of Included Publications

Author(s)	Type	Aim	Shame focus; context	Key conclusion(s)	Population of interest ^a
Empirical Publications					
Ahmed (2006)	Journal article	“[T]o provide a longitudinal evaluation of the relationship between shame management and children’s bullying status.” (p. 28)	State shame; bullying	“[W]hile there is a story of stability in children’s bullying status, there is also a story of change over time: a child’s particular bullying status can change and this change is associated with his or her shame management skills.” (p. 36)	Adolescents in Australia
Ahmed (2008)	Journal article	“[T]o answer what promotes bystander intervention in the context of school bullying using a restorative justice approach.” (p. 203)	State shame; bullying	“[T]ackling school bullying requires ‘whole-of-school’ participation not only in the aftermath of a bullying incident, but also before and during it.” (p. 212)	Secondary school students in Bangladesh
Ahmed & Braithwaite (2004)	Journal article	“[T]o theoretically integrate important constructs from the disciplines of criminology and psychology into a model of bullying behaviour.” (p. 271)	State shame, shame-proneness; bullying	“[T]ackling school bullying is a multidimensional exercise (Tattum 1997): parents, teachers, and children are all important players.” (p. 288)	Children in Australia
Ahmed & Braithwaite (2006)	Journal article	“[T]o examine the relationships among forgiveness, reconciliation, and adaptive shame management, and investigate their roles in reducing school bullying.” (p. 363)	State shame; bullying	“[T]he three key principles of restorative justice are inherently important in the dynamics of interpersonal relationships more generally, and need to be explicitly accommodated in a formal restorative justice setting.” (p. 366)	Children in Bangladesh
Barrett et al. (1993)	Journal article	“[A]imed at determining whether a shame-relevant and a guilt-relevant pattern of responses to a standard violation could be distinguished in toddlers.” (p. 481)	State shame; distinguishing guilt- and shame-relevant behaviour in mishap situation	“[T]his study highlighted some coherent individual differences in toddlers’ responses to their ‘breaking’ another person’s ‘favourite’ toy.” (p. 502)	Young children in America
Berti et al. (2000)	Journal article	“[T]o map the developmental sequence of children’s knowledge of the three emotions [sadness, guilt and shame]... [and] to examine which emotional consequences children assign to the presence of a parent in the eliciting situations,” (p. 299)	State shame; children’s understanding of sadness, guilt, and shame	“The results of our two studies show that children know about shame and guilt earlier than has been assumed or shown in the literature up to now, thus questioning the tenet that complex (social, or self-conscious) emotions are understood much later than basic, simple, or fundamental ones.” (p. 316)	Children in Italy
Jarc (2004)	Thesis	“[T]o identify how several different children understand experiences with shame.” (p. 5)	Body shame, relationship shame, competence shame, and general shame; interpersonal relationships	“This research has shown that young children <i>were</i> generally capable of identifying and acknowledging shame and were able to provide at least a partial definition of the shame experience as the literature has described.” (p. 295)	Children in the USA

SHAME REGULATION STRATEGIES USED BY CHILDREN AND ADOLESCENTS

Author(s)	Type	Aim	Shame focus; context	Key conclusion(s)	Population of interest ^a
McCaslin, et al. (2016)	Journal article	“[T]o better understand how students think, feel, and cope – their emotional adaptation – when making mistakes in the pursuit of classroom learning and how this might impact their relationships with peers.” (p. 1)	State shame; classroom learning and social interactions with peers	“The stability of students’ emotional adaptation profiles suggests that students develop characteristic emotional adaptations to classroom learning demands.” (p. 2)	School students in the USA
Morrison (2006)	Journal article	“[T]o test the constructs of shame management (shame acknowledgment and shame displacement) and group value (pride, respect, and emotional group value) in explaining differences across four bullying status groups: nonbully/nonvictim, victim, bully, bully/victim.” (p. 371)	State shame; bullying	“The results support the predictions that shame management (acknowledgement and displacement), status within the school community (respect), status as a member of the school community (pride), as well as the emotional value of being a member of the school community vary with bullying status category.” (p. 383).	Adolescents in Australia
Okur & Corapci (2016)	Journal article	“[T]o examine intracultural variations in Turkish children’s emotion expression in relation to socioeconomic status characteristics, alone and in combination with child gender and their interaction partners.” (p. 440)	State shame; intracultural variations	“Our results point to SES [socioeconomic status] differences, alone or in combination with gender, in children’s expression of anger, sadness and shame.” (p. 455)	Children in Turkey
Ross (2017)	Journal article	“[T]o explore the broad relevance of emotional self-evaluation to preschool children’s prosocial choices.” (p. 72)	State shame: achievement shame, moral shame; prosociality	“Results confirm that the broad capacity for self-evaluative emotion is established during the preschool years and relates to empathetic concern. Moreover, these social emotions can be used to predict prosocial choice.” (p. 67)	Young children in Scotland
Smiley et al. (2016)	Journal article	<i>No explicit aim, but</i> “explored change in school-aged children’s engagement during an impossible puzzle task, in relation to their expression of discrete negative emotions (i.e., sadness, shame, anger), perceptions of parent use of PCR [positive conditional regard] for anger suppression, and the interaction of these two factors.” (p. 925)	State shame; achievement	“Our results show that socialization of anger expression is associated with differences in performance for school-aged children who experience anger/frustration during a failure task.” (p. 933)	Adolescents in the USA
Stern (1999)	Thesis	“[T]o assess the relation between shame and perceptions of controllability, to explore coping responses associated with shame, and to examine factors that may moderate the relation between shame and both avoidant and aggressive coping among preadolescents.” (p. 26)	Shame-proneness, recall of state shame; perceptions of controllability, coping responses	a) “[W]hen transgressions are objectively controllable, it may be helpful to increase children’s sense of guilt and decrease their sense of shame.” b) “[B]olstering children’s self-esteem (which shame-prone children often lack) by providing them with opportunities for success may enhance their self-efficacy and also may increase their problem-solving efforts.” (p. 92)	Adolescents in the USA

SHAME REGULATION STRATEGIES USED BY CHILDREN AND ADOLESCENTS

Author(s)	Type	Aim	Shame focus; context	Key conclusion(s)	Population of interest ^a
Thomaes, et al. (2007)	Journal article	“[T]o promote our understanding of externalising shame responses by examining individual differences in children’s propensity to employ them.” (p. 563)	Responses to shame; self-esteem	“[R]esults revealed that narcissism, in contrast to global self-worth, was associated with externalizing shame responding. In addition, actual but not perceived social preference was inversely related to externalizing shame responding, suggesting that the social self- perceptions of children prone to employ externalizing shame responses may be inflated.” (p. 559)	Adolescents in the Netherlands
Ttofi & Farrington (2008)	Journal article	“[T]o operationalize and empirically test the basic postulates of Reintegrative Shaming Theory..., paying special attention to the intervening processes that – according to the theory – should occur between family factors and bullying.” (p. 352)	State shame; bullying & parenting	“RST [Reintegrative Shaming Theory] is useful in explaining the link between family factors and bullying, and that RST has cross-cultural applicability.” (p. 352)	Adolescents in Cyprus
Non-Empirical Publications					
Barrett (1998)	Book chapter	<i>Chapter addresses three questions:</i> “1. What is an emotion? 2. What about emotions undergoes developmental change, and, more specifically, what developmental changes occur in one or two specific emotion families? (I will examine shame and pride). 3. What are the functions of these emotions for the child?” (p. 109)	Focus unspecified; development, functionalist perspective	“Shame and pride, like other emotion families, promote adaptive responses to relevant aspects of the environment, but may interfere with adaptive responses to other aspects of the environment.” (p. 131)	n/a
Cole et al. (2009)	Book chapter	<i>Chapter outline:</i> “In this chapter, we discuss emotional dysregulation and illustrate how it may develop in relation to a particular class of maladaptive behaviour – serious misconduct.” (p. 187)	Chronic shame; misconduct	“Emotion regulation plays a role in the development of serious misconduct.” (p. 204)	n/a
Namka (1995)	Journal article	No aim in article given, case study describes “a combination approach drawing from different theoretical approaches was used to help an acting out child deal with shame which resulted from the trauma of being sexually abused.” (p. 81)	Chronic shame; sexual abuse trauma	“A multi-approach to shame reduction deals with the complexity of deep feelings of unworthiness that sexual trauma can cause.” (p. 94)	n/a

Note: n/a = not applicable

^a Age bracketing – children: 5-10 years of age inclusive; young children: under 5 years of age; adolescents: 11-17 years of age inclusive. Where there is overlap in the sample between developmental stages, bracket applied as per *Age* of sample. School stage given as proxy when age not stated by author(s).